Continuity and Renewal: The Demands of Excellence

A Response to the Discussion Paper of
The Commission on the Future Development of
the Universities of Ontario

Council of Ontario Universities
Conseil des Universités de l'Ontario
1984

COUNCIL OF ONTARIO UNIVERSITIES
CONSEIL DES UNIVERSITÉS DE L'ONTARIO

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Mr. Edmund C. Bovey
Chairman
Commission on the Future Development
of the Universities of Ontario
101 Bloor Street West, 14th Floor
Toronto, Ontario

Dear Mr. Bovey:

On behalf of the Council of Ontario Universities I am pleased to submit this brief in response to the invitation your Commission issued in conjunction with the publication of Issues and Alternatives. It is our sincere hope that it will assist you and your fellow commissioners to deal in a constructive way with the large policy matters affecting Ontario universities and those they serve.

We look forward to our meeting with the Commission in September.

Sincerely,

Edward J. Monahan.

Edward J. Monahan
Executive Director

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of The Commission on the Future
Development of the Universities of Ontario,
"Ontario Universities 1984: Issues and
Alternatives"

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SUMMARY

Introduction

Council's response opens with a summary recall of the nature and objectives of Ontario universities and their present great importance for both Ontario and Canada through their core undertakings of teaching and research. In reaching a point in their development where enrolment and sponsored research are at record levels, Ontario universities have been characterized by a high degree of institutional autonomy, particularly in the allocation of operating funds provided through block grants. This has not been incompatible with accountability to the public nor with inter-institutional cooperation. Such autonomy requires that initiatives and management rest with individual institutions in a generally decentralized system. While the Commission accepts the Minister's statement that future levels of funding will not fall below the present level, its report does not question the adequacy of current government funding of Ontario universities. For this reason, in the final section of its response, COU steps beyond the parameters of the Commission's paper to restate its judgment that financial support from the Provincial Government over the past decade has been grossly inadequate, and that a continuation of this policy would have disastrous results for the universities of Ontario and the citizens they serve. In the central portion of its response Council addresses the main themes of the discussion paper under the headings of quality, accessibility, adaptability, system balance, funding, planning and coordination.

Quality

Despite the centrality of high quality academic programmes and research to the mission of universities and the excellent reputation of Ontario universities, the quality of the university enterprise is now seriously threatened. In the case of undergraduate programmes, including some professional programmes, the quality has substantially declined. The explanation lies in the drop in provincial financial support over a period which saw a dramatic rise in student numbers, accompanied by only a modest increase in faculty positions. The decline in the quality of university education in Ontario is most evident in the universities' deteriorating physical plants; in the student:faculty ratio as it affects class size, laboratory sessions, essay and exam reviews, counselling; in outdated library collections; in pedagogical and research equipment that is not 'state of the art'. Although new information and communications technology may enhance the quality of university teaching and research, and further accessibility through the distance education mode, such partial technological solutions are costly and cannot solve problems created by inadequate funding.

Accessibility

Council's brief reviews the Ontario Government's long-standing policy on accessibility to university studies, the financing structure through which this policy has been implemented, and questions whether the two can presently be reconciled. Fiscal restraint has virtually eliminated the universities' capacity to absorb further enrolment growth. While

endorsing the principle of broad accessibility, Council's major concern is that this should mean access to an education of quality. In reviewing admissions policies in the context of high demand for a limited number of places, the question may be raised whether generally accepted admissions requirements continue to be relevant. The use of standardized achievement tests in English (français) and mathematics at the school leaving level to complement Grade 13 marks, still the best indicator of future university performance, would provide a basis for more equitable decisions on admissions and scholarships. But this would not address the fundamental policy questions about accessibility. It is widely recognized that because of socio-economic and attitudinal factors, not all Ontario residents with the intellectual capacity to profit by university study apply for admission to university.

Ontario's performance in a world of accelerating scientific and technological change will depend on the availability of a large pool of well trained university graduates. The universities' own future is dependent on the vigor and excellence of graduate studies in the province. Although the number of degree holders in Ontario has more than doubled in the last decade, rates of participation in the labour force and levels of earnings indicate that there is no oversupply. To a remarkable extent universities in Ontario have been responsive to shifts in student demand toward professional and semi-professional studies. Any further adaptation in this direction must take into account the imperfection of present manpower planning techniques, the considerable lead-time required for major shifts in discipline emphasis, and the probable need for supplementary funding.

Although a strong case can be made for a higher participation rate, without increases in funding and in institutional capacity future enrolment is unlikely to rise above present levels, regardless of an increase in demand for places, or changes in the structure of Ontario secondary education such as the compression of five years into four. Enrolment planning must, then, continue as a major priority for Ontario universities. Council also recommends a review of policies concerning the desirable number of international students in undergraduate and graduate programmes, and stresses their importance both in the maintenance of quality in such programmes and in Canada's future trading relations.

Adaptability

Despite the record of Ontario universities in continuously adapting to changing circumstances, financial constraints now place them at the limit of such adaptability. Adaptation is closely linked to faculty complements and their renewal. As a consequence of fiscal restraint, universities have been unable to appoint adequate numbers of new faculty and there presently exists an imbalance between teachers and researchers with permanent appointments and younger academically oriented Canadian graduates. For this and other compelling reasons, there may well be a shortage of Canadians to staff our universities in the future.

The Commission has proposed the creation of an adjustment fund to assist in faculty renewal. COU advocates the creation of an Incentive Fund that would not be used solely to adjust faculty complements, but also to enhance adaptability through modifications to physical plants to

adapt to new discipline needs, new modes of instruction, and new relationships with business and industry. Savings which might arise through the application of the fund should accrue to the institutions involved, providing that the new resources could be shown to be intended for the improvement of existing programmes or the creation of new ones, consistent with the institutional mission and system objectives.

Balance and Differentiation

The present degree of differentiation among Ontario universities, particularly at the graduate level, is almost entirely the result of institutional initiatives. It is a clear sign of the health of the system. Further differentiation must not be at the expense of individual institutions' commitment to core disciplines, nor financed by the diversion of funds from them. While the best use of limited resources requires some concentration in centres of strength, institutional self-definition, together with financial incentives rather than legislative intervention, should be the primary process toward further role differentiation within the system. This is best assisted through a voluntary organization such as COU, one without decision-making responsibilities on behalf of the system, together with an appropriate body intermediate between the universities and the Government (see below). But greater differentiation and coordination, while they may enhance effectiveness, cannot be expected to solve problems created by inadequate funding, nor to achieve significant real savings through supposed economies of scale.

Funding

To coordinate the roles of the federal and provincial governments in the funding of university teaching and research, Council proposes the creation of a Canadian Advisory Council for Higher Education and Research. In COU's view, the legitimate interests and responsibilities of both levels of government in research could be met if the core undertaking of universities were funded by both levels via the institutional infrastructure. Contract research, on the other hand, should be fully funded by the sponsors.

As concerns tuition fees, a majority of Council members would favour a staged increase in fees to represent a greater share of institutional costs in providing a quality education, provided that student aid were similarly adjusted. Universities would have enhanced financial flexibility if they had discretion to set tuition fees over a wider range by programme and even by institution.

Council rejects both student vouchers and non-formula, discretionary funding as means to allocate operating funds. It supports formula funding according to the currently recognized criteria, but has concerns about the adequacy of the present formula in the new environment, since the formula is judged unduly dependent on a single input measure: enrolment. In addition, it must be stressed that the present formula is simply an allocative mechanism. It does not determine the size of the block grant to the university system. A multi-dimensional formula might be explored, with consideration of such components as base funding related

to core commitments to teaching and research, plus differential supplementary grants in support of particular institutional responsibilities such as bilingual, regional and distance activities. Similarly, a new approach must be taken to capital grants, after a decade of government suspension of the formula governing capital expenditure. Complementing these two initiatives should be a fresh approach to encouraging support from the private sector, although this could never be a panacea for current fundamental problems.

Planning and Coordination

The COU brief reviews the advantages and disadvantages of the eight options outlined by the Commission to meet future planning and coordinating requirements. Council concludes by supporting the concept of a governmentally appointed intermediate advisory agency, but one with a clarified and strengthened role. A key element in the execution of the proposed new mandate for a successor to the Ontario Council on University Affairs would be a continuing and iterative dialogue with the universities on such subjects as role within the system, institutional capacity, resources and future plans. Responsibility for initiating the planning process would rest with the universities; the advisory agency would employ financial incentives and disincentives to further the implementation of approved plans.

In the last section of the brief, Council steps outside the financial limits proposed by the Government and accepted by the Commission in order to underline the judgment that the Government's desire for the

maintenance of quality in the Ontario university system is impossible to realize in the present funding environment. Despite the examples of other jurisdictions where university funding has recently been reduced or systems rationalized, few if any of these have been the object of such severe financial constraints, over such a long time, as the universities of Ontario. And some jurisdictions have now reversed their earlier policies, with massive inflows of new funds. The funding of Ontario universities is not excessive, as some have suggested--in blunt fact, it is inadequate. Improvement in institutional planning and programming, in inter-institutional cooperation and coordination, in system structures and methods of funding allocation can be made in the interest of enhanced efficiency and effectiveness, but none will improve quality if financial support remains at its current level. Can the Province of Ontario afford to spend more money on its universities? The pressing question is: can it afford not to?, so essential are these institutions to the future well-being of the Province.

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1. Introduction: The role of Ontario universities

The Council of Ontario Universities welcomes this opportunity to present its views on the current situation of Ontario universities in a response to the invitation from the Commission on the Future Development of the Universities of Ontario to comment upon its discussion paper, Ontario Universities 1984: Issues and Alternatives.

Without repeating here in extenso the views on the nature and role of universities and their paramount significance in contemporary society conveyed in our many earlier briefs and reports, Council nevertheless wishes to note that its comments on the Commission's discussion paper should be understood in a context represented by the following points:

- The universities of Ontario have a large and important mission, one touching the lives of all Ontario citizens and affecting their social, cultural and economic well-being.

- As institutions committed to the creation, preservation and transmission of knowledge in all its forms through research and teaching, the universities of Ontario represent a rich and unique intellectual resource for all Ontarians and all Canadians.

- Canada in general and Ontario in particular face enormous challenges in confronting the accelerating pace of scientific and

technological change. Research is an essential key to successfully meeting these challenges. A high proportion of the basic and applied research conducted in Canada is done in universities. Ontario universities represent over 40% of Canada's university research capacity. Through their doctoral programmes they also provide half of the researchers currently trained in this country.

- The extent of the present commitment of Ontario universities to teaching and research can be measured by reference to the fact that since 1970-71 Ontario universities have increased full-time equivalent enrolment by more than 55% and their funded research activities by over 60%.

- Demand for access to higher education is presently at record high levels and continues to grow. Because of limitations on capacity and resources, most Ontario universities now limit enrolment in all first-degree programmes.

- The creation and transmission of knowledge and skills across a broad spectrum of academic disciplines and professions constitute what may be called the core undertaking of universities. The financial support for this undertaking is best provided through a system of core funding, through block grants which the universities are free to allocate internally in accordance with their own academic and financial planning.

- A high degree of institutional autonomy characterizes the history of Ontario universities. It remains a prerequisite for strong and vigorous universities. This autonomy is not incompatible with accountability. Nor is it antithetical to the development of inter-institutional cooperation and coordination. Autonomy implies that initiative and management should rest with individual institutions in a generally decentralized system. At the same time, there is a need for more effective coordination of planning for the system. An effective buffer body standing between government and the universities with clearly specified advisory powers and responsibility for assisting in the development of system planning is a prime necessity in improving coordination.

Except in the conclusion, for purposes of discussion the brief foregoes challenging the parameters outlined by the Commission. These include acceptance of the continuing validity of the five fundamental objectives established by the Government for Ontario universities, though Council prefers the earlier statement by the Honourable William Davis made in 1967 when he was Minister of University Affairs. In our view this expresses more adequately the fundamental role of universities in a free society.[1]

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1. Also five in number, these objectives are:

   . the provision of skills and knowledge that will allow graduates to play a vital role in our society;

The brief takes account of the Minister's statements that "the total resources to be made available to the new university structure will not differ substantially from that which would be normally allocated", and that "annual increases to the real public resources provided to the universities will reflect the desire to protect the integrity of the universities, to strengthen their ability to contribute to the intellectual, economic, social and cultural foundations of society as well as reflect the Government's policy of fiscal restraint and prudent management".

These statements are understood by Council to mean that the financial resources which come to the universities through the present operating grants mechanism, together with the financial assistance to students provided through OSAP, will be adjusted annually to take account of rising costs. Employing this interpretation, Council comments on other sources which might provide increases in revenue to the universities. These include capital grants, targeted government research grants from

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1. (cont'd)

- the promotion of the powers of the mind so as to create men and women with a love for learning and the motivation to seek new knowledge throughout their lifetimes;
- the search for truth and new understanding beyond the frontiers of present knowledge;
- the transmission of our common culture both to its student body and to the wider community;
- the provision of graduates whose attitudes are consistent with the free society in which we live.

other ministries and government agencies, higher income from tuition fees and increased support from the private sector.

Noting that the Government has explicitly excluded the closure of any university, the brief recognizes the possibility that fundamental changes may be necessary to some or all of the institutions and takes into account the commitment of the Premier to consider providing additional funds to facilitate faculty renewal and other adjustments arising from the Commission's recommendations.

The brief is organized to follow the outline presented in Issues and Alternatives. It deals in turn with the four major concerns of the Commission: quality, accessibility, adaptability, and balance and differentiation. It then treats the issues of funding and structure. In the conclusion, Council steps outside the financial resource parameters established by the Government and accepted by the Commission to comment on the desirability of establishing a higher level of public expenditure on universities than that envisaged in the discussion paper. There are six appendices, each devoted to a specific topic addressed in the brief.

While the brief is based on the questions raised in the discussion paper, it does not undertake to provide specific answers to all of them. The contents represent for the most part a consensus within Council. In some cases the range of opinion is identified; in others the majority view is advanced.

2. Quality, the fundamental consideration

Because Council recognizes that universities can fulfil their mission in society only by providing academic programmes and research of high quality, the quality of the university enterprise in Ontario has always been a dominant concern. Accordingly, Council strongly endorses the judgment of the Minister, affirmed by the Commission, that excellence must remain the highest priority for both our universities and Government, and that a strong thrust towards excellence is vital to the future well-being of the institutions and the people of Ontario.

Ontario universities have enjoyed a reputation for offering academic programmes of high quality and for making significant contributions to research. Admittedly, quality is difficult to measure. Still, there are criteria that provide meaningful measures. Some of these are objective, others subjective. Some measure quality directly, others only indirectly. Some are absolute measures, others are relative. All should be taken into account. When they are, and are applied to Ontario universities in their present circumstances, they should give a careful analyst pause. For they show a high quality university system that is now at risk.

The best direct measures of the quality of university programmes are those provided by peer assessment. These involve subjective judgments as well as objective measures and they embody comparisons. The Council,

through the Appraisals Committee of the Ontario Council on Graduate Studies (OCGS), has operated a peer assessment programme evaluating graduate programmes in Ontario universities for almost two decades. This system of appraisals is an excellent example of peer assessment and has had a profound impact on the development of graduate studies in this Province. It is described in Appendix A. Evaluations based on peer assessment do not usually indicate decline in quality until it has existed for some time and has reached a certain point. By this measure, however, evidence of declining quality in Ontario universities is now emerging. Some graduate programmes have failed to pass appraisal and the universities, lacking the resources required to bring them up to an acceptable standard, have decided to close them. Others, while still of good quality, will have difficulty maintaining that position. Similarly, recent professional programme accreditation reviews have been critical of the resources provided for the programme under accreditation.

Input measures, which are indirect, are relevant to judgments on quality. The interprovincial comparisons of university financing published by the tripartite (OCUA/COU/MCU) committee show that in 1981-82 Ontario stood last among all provinces in Canada in operating grants per full-time equivalent student, some $1600 (more than 25%) behind the rest of Canada. Even allowing for the possible greater efficiency of a more mature university system, this gap reflects a shortfall in financial support with substantial negative implications for quality. Other data in this report lead to a similar conclusion.

The substantial increases in full-time equivalent enrolment over the period since 1970-71 in comparison with income per student in constant dollars and the recent dramatic growth in research activity, cited above and noted in Issues and Alternatives, are also relevant when assessing quality. The deterioration of overall student:faculty ratios, from 12.9:1 in 1970-71 to 16.3:1 in 1982-83, have had an effect on quality. So too has the decline in the number of new full-time faculty appointments, down 44% since 1970-71, and the growth in the proportion of courses taught by part-time faculty. The decline in university expenditures on library acquisitions and on scientific equipment and supplies is relevant. The aging of physical plants, with an average age now in excess of nineteen years, and the pitifully small amounts of funds provided over the past decade for maintenance, repairs, renovations and new construction, are further indirect measures that reinforce the judgment that the quality of university operations is declining.

The Commission has identified five major functional responsibilities of the universities and inquires in which of these the most serious deficiencies exist (Question 2). Such a question is difficult to answer since the inadequacy of financial resources has had effects across all areas. Moreover, there are variations from institution to institution. However, in system terms it is likely that the overall quality of undergraduate education, including some professional

programmes, has suffered the most serious decline. Increased class size, less tutorial and laboratory assistance, fewer and larger tutorial groups, fewer and larger laboratory sessions providing less opportunity for `hands on' experience, shortages of laboratory equipment (especially `state of the art' equipment), fewer written assignments, the elimination of senior essays, more restricted course selection, reduced access to libraries, reductions in library support services, reductions in student support services - counselling, guidance and the like: these and many other changes made to reduce operating expenditures have combined to reduce the quality of undergraduate education in the universities of this Province.

The Commission is properly concerned with questions about how the resources made available to universities might be employed with maximum efficiency and effectiveness to enhance quality, and inquires whether new information and communications technology might serve this purpose (Questions 4 and 5 and parts of 13, 14, 22 and 23). Council has asked its Committee on Distance Education to provide some detailed comments and these are included as Appendix B. The general response is that the new information and communications technology can improve the ability of universities to meet the needs of students, especially part-time adult students and those who reside at a distance from campus; and that increased use of this technology can improve the efficiency and effectiveness of the educational services provided. Since the delivery costs of such services are high, however, the extension of this approach is not likely to result in substantial cost savings. Moreover,

technology is not an effective substitute for the personal contact that is an essential requirement of education of high quality in whatever mode. While technology, employed either on-campus or to facilitate distance learning, has a valuable and unique role to play, it should not be seen as a kind of second resort and cheaper substitute for the 'normal' methods of instruction.

The role of communications technology in facilitating research should also be given attention. Networks which link scholars through local computers are already playing a significant role in furthering intellectual collaboration (electronic mailbox, conferencing systems) and in making possible the sharing of specialized computing resources. The Ontario Association of Computing Services Directors has recently established a network called NetNorth whose current members include ten Ontario universities and colleges as well as McGill University. Greater use of this technology in research could be made if more resources were made available for this purpose.

3. Accessibility, a complex matter

Some think that current government policy on accessibility gives qualified students the right to expect access to the academic programme and institution of their choice. This is mistaken. The long-standing policy of the Government of Ontario on accessibility to university is that there will be a place in some undergraduate programme at some Ontario university for every qualified graduate from Grade XIII who wishes to pursue a university education. Although this policy has never been clearly defined in operational terms, as OCUA has pointed out,

> In Ontario the phrase `accessibility for all qualified applicants' has been anything but an empty slogan. It has captured the essence of a major policy commitment by Government.[2]

The policy was born in the late 1950s, a child of the consensus of opinion leaders from business, industry, education and government that an investment in providing expanded educational opportunity, including higher education, would produce substantial economic, social and cultural benefits, both for society and for the individual. This policy has operated primarily in a demand mode, i.e., in response to perceived student demand. The objective has been to provide sufficient places to meet the growing student demand as this was identified through

2. Ontario Council on University Affairs, Third Annual Report, 1976-77. p. 7.

applications to university from secondary school matriculants. The universities were urged to make provisions to meet this demand; the Government undertook to provide the necessary financial resources. The university community, with some outside help from government advisors, was largely left to determine the details.

The general objective of the Government was

> to ensure that no student who has the capacity will be deprived of the opportunity of attending university and developing his talent to the fullest extent.[3]

It was implemented primarily by means of three interrelated spending programmes: a capital programme to provide additional physical facilities, an operating grants programme to provide the universities with the necessary operating revenues, and a student assistance programme directed at removing financial barriers to access to university.

During the 70s, the methods of providing financial support for Ontario's universities were gradually altered. As a result, subtle changes began to take place in the meaning of the policy on accessibility. In 1972 a moratorium on capital grants was introduced, thus signalling the end of the physical expansion of the system. By 1974 a global budgeting system was firmly established which closed the former open-ended system of

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3. Statement of J.N. Allen, Provincial Treasurer, to the Ontario Legislature, 25 February 1959.

funding under which total operating support for universities was based on the number of students enrolled. Instead, expenditure limits for higher education were established in which accommodation of enrolment increases was only one component. Initially, the effects on accessibility were imperceptible. Some universities had already opted for a 'steady state'; the majority continued to admit students with minimum qualifications to some programmes. Since 1977-78, however, the Government's programme of fiscal restraint has been a more important determinant of general levels of university funding support than has its commitment to support increases in enrolment. As a result, the capacity of universities to absorb enrolment growth has been severely strained.

Access to Undergraduate Study

By the Fall of 1983 most universities had established enrolment limits on admission to first year in all programmes. As a result, attention was focused on the issue of whether some Grade XIII graduates with averages of 60% on 6 credits (the generally accepted minimum admission requirement) wishing to attend university were being denied a place. The current study of qualified Grade XIII graduates who applied for admission to university in September 1983 and did not register should provide an answer.

At the same time, some have questioned whether, in the light of perceived grade inflation in the secondary schools, the generally accepted minimum admission requirement continues to be relevant.

Comparative data over time on the quality of candidates presenting themselves for admission to university are not readily available. It is generally believed, however, that some measure of grade inflation has occurred in Grade XIII marks and partial evidence for this is apparent in the percentage of Grade XIII graduates who received the Ontario Scholar Diploma - 13.4% in 1970 compared with 26.3% in 1983. Nevertheless Grade XIII marks continue to be the best available single predictor of university performance, a judgment that was substantiated by COU in a report issued in 1979 on achievement testing. At the same time, evidence from that same period shows that the universities can have no assurance of uniformity of marking standards in Ontario secondary schools. Differences in marking standards likely have little impact on overall accessibility. But they clearly create problems of equity for students with respect to admission to limited enrolment programmes and in the awarding of scholarships. For these reasons, COU has encouraged the Ministry of Education to implement achievement tests in mathematics and English (français) which could be used by universities to supplement Grade XIII marks in the admissions and placement process. Many of our member institutions would also favour standardized achievement testing in other key subjects accepted for university admission.

Aside from questions about the comparability of marks among different secondary schools, Council is concerned that the Commission not focus too narrowly on the value of Grade XIII marks as a measure of preparedness for university study. The discussion paper directs its

attention mainly to students proceeding directly from secondary school to university. A significant number of students entering Ontario universities are from other jurisdictions where the system is different. More importantly, there is a large and growing number of mature students who seek admission to university after a period in the work force. For this category of student, secondary school matriculation marks are less relevant; initial performance in courses is used as the main device to assess capacity to profit from university enrolment.

The most important benefits of a university education are non-measurable - for the individual they are related to the intellectual and spiritual development that occurs as a result of a university experience, for society they are related to the values that are fostered by a highly educated citizenry. Measurable benefits are most readily found in employment rates and earnings data for university graduates. In December, 1983, the labour force participation rate for all university graduates in Ontario was 84.6% compared to 64.1% for the rest of the population. During the same month, the unemployment rate of degree holders was 3.2% compared to 9.5% for the rest of the population. This comparative advantage has been maintained by new graduates, even in the aftermath of a recession. The report "Employment Survey of 1982 Graduates of Ontario Universities", recently released by the Ministry of Colleges and Universities, states that the unemployment rate for 1982 graduates in the spring of 1983 was 11.1% compared with the overall unemployment rate of 18.7% among Ontarians aged 20 to 24. In addition, 87.1% felt that in terms of general skills learned, their jobs were

related to their field of study, while nearly 80% of all graduates employed full-time indicated that they were satisfied with their jobs. According to the 1981 census, average employment income for university graduates in Ontario was 85% higher than that for those without university preparation. In the free market society, employers are clearly prepared, as an axiom of good business, to pay a significant premium to persons with a university degree. The number of degree holders in Ontario's population has more than doubled during the past decade; yet there is no evidence of there being too many.

Access to Graduate Study

In the area of graduate studies, other factors work to affect the supply and demand of students. In most areas of study the post-graduate system is adequately accommodating current demand, although every university has some programmes that are unable to accept all qualified applicants. In the case of full-time students, however, the limiting factor is often not the capacity of the programme but the ability of the university to provide an adequate level of financial support. Offers of full-time admission to graduate school without an accompanying offer of financial support are rarely taken up. Limits on the number of scholarships and on the amount of funds for teaching and research assistantships are real impediments to attracting qualified full-time students.

For part-time graduate students the factors limiting accessibility are quite different. Part-time students are usually employed full-time and

hence are not mobile. Unless the programme they want to study is available at a university nearby, they will be unable to pursue it. Financial support is not a significant factor; the availability of classes in the evenings or at other suitable times is. The large majority of part-time students are registered in master's programmes, many of a professional or semi-professional nature. These programmes play a vital role in meeting the needs of part-time students in the several regions of the Province.

The shortage of graduate students in certain critical fields where there is a need for more qualified people is a matter of concern. In most cases graduate schools are the only source of the highly qualified men and women who will be required to meet society's needs in these fields. Because of the length of time required to complete a graduate programme, particularly the PhD, and because it is impossible to predict future manpower requirements with any accuracy, it is essential that a broad base of support for the universities' graduate and research programmes be maintained. By the time the demand for graduates in a certain field is recognized, it is usually too late to do anything about it. We hear much about an oversupply of PhDs in certain disciplines, but an undersupply in a critical field will have far more serious consequences for the country than an oversupply. Unless programmes of student support are adequate to attract the best students into the graduate schools there will continue to be a shortage of qualified people in many critical areas.

Although precise manpower forecasting is impossible, one can identify many of the areas in which new developments are likely to have a major impact on the universities' graduate programmes. Graduate programmes must keep abreast of these new developments. To this end, the Ontario Council on Graduate Studies and COU have recently decided to organize a series of annual colloquia on the general theme "Graduate Education: Strategies for the Future". An important aspect of the colloquia is the participation of representatives from industry and business. This interaction provides the academic community with a greater awareness of developments in industry, while also providing industry with a better appreciation of what is happening in the universities. The results of these discussions will form the basis of a major study which will address the question of how the universities are responding to the challenges and opportunities which the new developments in these fields provide.

Current Participation Rates

Although participation rates are relatively high, there are certainly many persons not attending university in Ontario today who have the intellectual capacity to do so. The participation rate for francophones remains below the average. Persons belonging to groups with a lower socio-economic status are under-represented. There are very few native people in our universities. While significant progress has been made since 1961, the participation rate of women remains below average. In 1961, the participation rate for women in Ontario was 3.3% of the female

population aged 18 to 24. The comparable rate for men was 9.9%. By 1982, the rate for women was 14.1%, that for men 16.7%. During the past ten years, more than 75% of the increase in full-time university enrolment can be attributed to increased participation on the part of women. Significant disparities in regional participation rates also exist. The reasons for this are complex and undoubtedly extend beyond the geographic distribution of universities in Ontario. Opportunities for the disabled to attend university also need to be expanded. In summary, while a great deal has been accomplished in providing wide access to higher education in Ontario, much remains to be done and there is potential for increased demand for access.

Canada in general and Ontario in particular face enormous challenges in confronting the accelerating pace of scientific and technological change. Ontario must undertake a major readjustment of its economic infrastructure if it is to maintain anything approaching its present advanced state of development. The universities of this Province have an enormous potential to contribute to this adaptation. The pace and direction of change are critically dependent on Ontario having access to a large pool of well-trained university graduates at all degree levels. A good case, therefore, can be made for increasing participation rates.

International students

No examination of accessibility would be complete without some consideration of the accessibility of international students to Ontario universities, a consideration that is absent from the Commission

discussion paper. Ontario universities are members of the international community of scholars. They have, therefore, some responsibility to assist in the training of future academics and researchers and professionals in other fields who are citizens of other countries, persons who lack opportunities at home for such training. This responsibility is heightened by the fact that many of the current members of our university staffs received a portion of their own university training abroad at a time when Ontario lacked the university resources it now has.

The presence of international students in our universities is a benefit which should be recognized as such. It is an academic and a cultural asset, providing opportunities for Canadians to learn more about other countries and to impart to these visitors knowledge of this country. International students bring their own academic strengths; they take away not only what they have learned but also their appreciation of this country and its institutions. Many international students move into positions of responsibility and authority in business, industry and government when they return home. Their experience here can make them important ambassadors on behalf of this country, and proponents of the goods and services which Canada offers on international markets. As a trading nation, Canada is heavily dependent on exports for its economic health; a good mix of international students in its universities can make an important contribution in this area.

The introduction of high differential tuition fees for international students has clearly had an adverse effect on the enrolment of these students in Ontario universities. Undergraduate first-year visa student enrolment in 1983-84 has fallen by 30% over its high only two years ago. The decline in the number of visa students entering graduate programmes has been more severe, particularly at the doctoral level. Application data indicate a further decline in the coming year. The time has come for a thorough review of current government policy on visa student tuition fees.

A matter of particular seriousness is the imposition of large differential fees for foreign graduate students. It is important to take action on this issue before it is too late. The proportion of international students enrolled in the Ontario graduate schools is not out of line with what one finds in every other major jurisdiction in the world. If the decline in graduate admissions of the past two years continues, Ontario universities will be in danger of losing any claim to membership in the international academic community. Several of the consultants who have appraised graduate programmes recently have commented on the negative impact of the higher fees for foreign students. Programmes which, by virtue of their international reputation, should attract students from around the world are no longer able to do so. While a large number of Canadians continue to go outside Canada for graduate work, this Province is effectively shutting the door on students from other countries wishing to come here.

The Parameters of Institutional Policy on Access

Universities establish their own admission requirements. Institutional decisions on programme admission requirements are made in the first instance on academic grounds - the prior achievement level judged necessary to offer a reasonable prospect for successful completion of the programme. Decisions on admission requirements, however, are also affected, perhaps increasingly, by the capacity of the programme, resource limitations including staff, facilities, and finances, and by enrolment/application pressures. In certain cases, such as medicine and dentistry, they are also affected by considerations of manpower supply and demand.

While manpower considerations may be appropriate in certain discipline areas where graduation from university usually leads directly to professional practice, great caution should be used in applying such considerations more broadly. In the case of medicine and dentistry, the relationship between academic preparation and professional practice is very close. In the case of education and law, it is less so. In the case of some other professional programmes the range of career opportunities available to graduates is quite wide. Attention should not be focused solely on the number of applicants to a given programme, or the numbers of graduates from it, but also on the quality of the professional services available in the province, as provided by both recent and earlier graduates.

As was noted in COU's statement on Federal-Provincial Relations and Support for Universities:

> it is important to recognize that a university education promotes certain skills that increase mobility among occupations [and that] ...the skills developed by that very generality in higher education [criticized by those who prefer narrow more specialized training] may turn out to be the most useful, both in terms of improving the overall life of the graduate, and making a positive impact on productivity for the employer. These skills have to do with such matters as developing the ability to ask the right questions; to think in a rigorous, rational manner; to apply the general as well as specific methodology of effective evaluation and decision making. Such skills widen horizons; they have general applicability and are useful in a wide variety of occupations. Moreover, they are the very skills thoughtful employers seek and expect from university graduates of all fields and disciplines.

In assessing the role of universities in development of new or expanded professional programmes, it must be recognized that major shifts in discipline emphasis require considerable lead time to implement. It must also be remembered that the academic decisions of students are made some four to five years in advance of employment. There is little evidence to suggest that the art of manpower planning has yet reached a level of development which would permit its use as a reliable basis for decisions either by individuals or institutions, in more than general ways.

Notwithstanding, universities have been responsive to shifts in student demand for increased opportunities to study in professional and semi-professional areas. In 1982-83, universities in Ontario awarded over 37,000 undergraduate degrees, an increase of almost 9,200 or 33% during the past ten years. Of that increase, 17% was attributable to growth in

arts and science output and 83% to output in professional and semi-professional fields. Constraints on basic levels of university support, however, are restricting capacity for further adaptation.

Universities recognize that, regardless of the state of the art of manpower planning, governments may be legitimately concerned with addressing perceived shortages of skilled personnel. If particular bottlenecks with respect to the development of highly qualified manpower can be identified, it may be appropriate for governments, through the provision of supplementary funds, to encourage a more rapid pace of adaptation in particular areas. Such intervention, however, should be rare and undertaken strictly on a temporary basis.

The Council of Ontario Universities continues to endorse the principle of providing broad accessibility to university to those who can benefit from it. Such a policy provides great cultural and economic rewards to our society, as well as to the individual participating. The Council is concerned, however, that a policy of general accessibility mean access to academic programmes of high quality. There is little value in permitting large numbers of students to enrol in universities if the institutions lack the resources to provide a sound university education to those whom they register. Ontario universities are dedicated to the highest academic standards in both instruction and research. For more than two decades they have been committed to providing opportunities for a university education to increasing numbers of students. Now, with all institutions at or near capacity and under severe financial constraints,

enrolment is being limited in order to prevent further erosion of quality.

In the view of Council, universities have the responsibility to establish admission requirements and enrolment limits on the basis of their own judgments of the numbers they can appropriately educate, given their instructional and research commitments and the resources available to them to meet these commitments. It therefore supports the decisions of member institutions to limit overall enrolment to the extent necessary to maintain the quality and integrity of existing programmes, even if this means that some qualified applicants are refused admission. Without increases in funding and in physical capacity it is unlikely that universities will expand enrolment much beyond current levels.

Future Demand for Access

Considerations about future demand for access to higher education in Ontario rest within a complex framework. That framework encompasses demographic considerations, factors which will affect university participation rates within the population as a whole, and the structure of secondary education in Ontario. In the coming decade, the last of these will likely have the greatest impact on the volume of demand for university entry. The pace at which the shift to twelve years of elementary and secondary schooling from thirteen occurs will determine the extent to which universities will have to confront a `double cohort'

of secondary school graduates. For the moment, we can only make assumptions. Our assumptions were outlined in the report, "Participation Rates and Future Enrolment in Ontario Universities" already forwarded to the Commission. They will have to be tested over time. COU has already discussed with the Ministry of Education and the Ministry of Colleges and Universities the implementation of monitoring procedures which will enable all concerned to develop a better sense of evolving student choice in secondary school. The impact that a reduction of one year of schooling will have on overall participation rates, however, is probably unpredictable. As well, the impact of the elimination of one year of schooling on the decisions which students make in choosing between universities and CAATs is entirely unknown. We believe that both have the potential to increase, rather than decrease, demand for university access. The most recent report of the COU Committee on Enrolment Statistics and Projections is included as Appendix C.

Thus far the focus has been mainly on enrolment of students for full-time study at university. It should be noted, however, that many of the same factors which have the potential to increase demand for full-time study apply equally to part-time study, though the weight of individual components of the demand equation may be different. Undoubtedly, technological change and the consequent need for professional re-training will be large factors in determining demand for part-time study for both undergraduates and graduates during the next decade. Of equal importance, however, at least with respect to absolute demand, is the

different demographic perspective for those age groups from which universities draw the bulk of their part-time enrolment. These age groups will continue to grow well into the 1990s. What is unknown is the impact the present constraint on access to full-time study will have on future demand for part-time study.

Clearly, there are major uncertainties about long-term enrolment prospects for Ontario universities. Although not the only factor at work, secondary school reform will ensure that demand for access to university study remains high for the next decade. In the 1990s, downward demographic projections of the relevant age cohorts suggest a decline in demand for places. Many other factors, however, could cause relative and indeed absolute demand to continue to rise. Enrolment planning, therefore, should continue as a major priority for Ontario universities both individually and collectively. Some increased measure of coordination of enrolment planning at the programme level and at the institutional level is needed. This planning must take place within the context of system funding and structure, matters dealt with in subsequent sections.

4. Adaptability, a key to the future

The Commission has correctly concluded that adaptability is a major concern among universities. Universities are keenly aware of the need to adapt continuously to changed and changing circumstances. As institutions they are organized for the longer term and quite properly take the long view on matters of policy. They are not opposed to change; nor are they incapable of adjusting to it. Their ability to absorb large increases in enrolment and at the same time provide for substantial shifts in student programme preferences away from arts and science into professional programmes, while maintaining the same overall faculty complement, well illustrates this. As the Commission notes, however, there are limits to their ability to adapt and these limits may now have been reached.

Academic staff are the most essential ingredient in the university enterprise and the capacity of the universities to adapt is related in an unavoidable way to the faculty complement. As has been mentioned, the total number of faculty has grown very little in the past decade and the number of new full-time appointments has sharply declined, down by 44% since 1970. The inability of universities to make new faculty appointments deprives them of the opportunity to maintain a proper balance between young and old scholars and researchers. As a result, the faculty age profile has become badly skewed, with a pronounced bulge in the middle and very few at the younger end. More than three-quarters of the faculty hold permanent appointments. In these circumstances,

many young academically-oriented Canadian graduates are deprived of an opportunity to practise their profession in a university and to make their unique intellectual contributions. Moreover, it is possible that down the road when the current cadres retire, we may find ourselves in a situation in which there will be a shortage of qualified Canadians to staff the universities in certain vital disciplines because of the difficulty in attracting the most gifted students to continue with post-graduate studies.

The Commission indicates that there is a commitment from Premier Davis that due consideration will be given by the Government to providing additional funds to facilitate faculty renewal and adjustment, and mentions as a possible short-term measure an Adjustment Fund to assist universities to develop policies and procedures on phased retirements, reduced responsibility appointments and faculty transfers to deal with academic programme changes. Savings resulting from such reductions in on-going faculty costs could then be used to establish a fund to support new academic programmes, the recruitment of additional faculty in areas of priority, the correction of the gender profile, and the appointment of `new blood´.

Given the financial parameters set out by the Commission, with no foreseen increase in real dollars over the present base level of government transfer payments, a strong case could be made for the establishment of a special fund, since without it the ability of many

universities to improve their adaptive capacity is likely to remain very limited. Accordingly, Council supports the establishment of a supplementary funding mechanism, but one which would be better designated as an Incentive Fund. Although grants from this fund would not be used to increase the base budget of an institution, in our view the fund should not be restricted to providing financial assistance to universities that reduce faculty complement. Enhanced adaptability, not reductions in programming, should be the goal. Therefore, the fund should be broadly available to assist in meeting one-time only costs of institutional adaptation. These will include the costs associated with selective reductions in faculty complements; they ought not to be restricted to these. Resources from this fund should be available as well to assist institutions wishing to modify their physical plants to adapt to new discipline needs, new modes of instruction and new relationships with business and industry.

Such a fund could also be employed to inject fresh vigour into graduate programmes. If graduate programmes are to remain relevant and attract first-class students, they must remain at the `cutting edge' of their disciplines. This is increasingly difficult to do in Ontario universities because of the sharp decline in the number of new faculty appointments and the reduction in the level of infrastructure support for research. If the fund were to be employed for these purposes, however, consideration would need to be given to extending the period of time during which grants were made available. The need to attract new, young faculty into the system would require a programme extending beyond three

years. At least five years and more likely ten would be needed. The NSERC university research fellowship programme has made an important contribution to faculty renewal in the areas of science and applied science. It could well serve as a model. A similar programme funded by the province and extending to the humanities and social sciences would assist Ontario universities to maintain their position in the front rank of Canada's graduate schools and at the same time provide greater academic career opportunities for bright young doctoral graduates. Council urges that serious consideration be given to these proposals for broadening the purposes of such a fund.

All universities would be able to apply for assistance from this Incentive Fund and would be encouraged to do so. The fund would have clearly stated eligibility criteria, but these would be specified broadly to encompass the range of purposes outlined above. In this way, all institutions could expect to receive some assistance from the fund. The buffer body should be responsible for administering the fund and for establishing a proper mechanism for determining allocations from it. Allocations should be made public and expenditures should be publicly accounted for.

The Commission inquires whether institutions reducing their base budgets and applying to the fund for assistance to meet the `once off' costs should be entitled to retain the savings or whether these should be held centrally (Question 25). If this adaptation resulted in decreased

enrolment for the institution because a programme was discontinued or its enrolment significantly reduced, under the present funding formula the institution would retain automatically 75% of its formula income plus its share of the enlarged total operating grant. There would be no central fund. Since the institution reducing its base budget would have had to undergo the agony of the adjustment, a good case could be made on these grounds that it would be entitled to retain the `savings´. This case would be strengthened provided the institution could show how it planned to employ the resources to improve existing programmes or to undertake new initiatives and this plan was seen to be consistent with its institutional mission and in accordance with system objectives. With this understanding, Council supports the view that institutions should retain any `savings´ derived from such adjustments. Under the existing formula, institutions would retain them; were the formula to be changed, adequate provision should be made to permit this.

As the Commission notes, early retirements, reduced responsibility appointments and faculty transfers are all means of improving institutional adaptive capacity and deserve careful examination. Policies and procedures to deal with these will need to be worked out in cooperation with the affected parties and respect the requirements of maintaining appropriate terms and conditions of appointment. A new factor will be the effect on retirement age of the implementation of the federal Charter of Rights in April 1985. Council is currently examining

the possible implications of this legislation. The results, expected to be available by the end of August, will form Appendix D.

5. Balance - and Differentiation, the right mix

The fourth major concern of the Commission involves balance, which it links with the central question of how best to support existing and future differentiation among the universities of the province. In dealing with these twin concerns, the Commission inquires into the appropriate balance among the five basic objectives of the university system affirmed by OCUA and CFRUO, and accepted by the Government.

In its 1981 Response to the Preliminary Report of CFRUO, COU indicated its continuing acceptance of these five fundamental objectives while expressing grave concern about the abilities of the universities to meet them properly without increased financial resources. The intervening three years have produced no evidence that would cause Council to modify this judgment. If anything, the abilities of the universities to meet these objectives have lessened. Since a meaningful balance among such broad and disparate objectives is impossible to define, Council cannot state what should be an appropriate system resource allocation among them. We note again, however, that despite the large investment in higher education, educational opportunities remain limited among certain groups in Ontario; enrolments in most professional programmes are now tightly controlled and enrolments in most undergraduate programmes are now limited; and research and development needs to which the universities might make major contributions remain unmet.

The Commission recognizes that there is already a considerable degree of institutional differentiation in the system. COU has always supported the principle of differentiation and considers the present degree of differentiation to be a clear sign of the health of the system. Some further differentiation may be desirable. To be effective, however, the changes that produce it must have the support of the affected institutions. Moreover, any moves to a further differentiated system must take care to ensure that every institution retains the mandate to provide a range of academic programmes in the core disciplines and is given the requisite resources to maintain the core of academic programmes and research activities that befit its university status. The issue is to determine the proper degree of differentiation desirable in the system at this time. It is obvious that the best use of limited resources requires some concentration in particular centres of strength. It is equally obvious, however, that considerable duplication in programming is also required. This duplication is necessary to provide at each institution a setting in which students will receive a proper university education and in which faculty can contribute to scholarship and research as well as to instruction. It is also necessary if the universities are to meet regional needs and the requirements of bilingualism.

There is already a very high degree of differentiation among our universities in graduate education (particularly at the doctoral level) and in research activities. The evolution of graduate programmes

in the Ontario universities has been based on institutional priorities guided by the requirements of the appraisal system, which has ensured that only those new programmes which the universities were prepared to provide with the resources necessary to achieve an acceptable level of quality were implemented. This has proven to be a good way of achieving differentiation of graduate programmes. Among the doctoral programmes in particular, the different research interests of the faculty involved have produced an even greater degree of differentiation. As a consequence, even though they lead to the same degree different PhD programmes in any given discipline offer students different opportunities for advanced study and research.

The Commission refers to the possibility of establishing special purpose institutions or centres of concentration (excellence). When such institutions or centres emerge in the normal course of a university's development or through cooperative arrangements among universities, and when they are adequately funded, they can provide a productive environment for research and graduate education. We would, however, oppose any attempt to create centres devoted entirely to research. Separation of research activity from teaching is not consistent with the role of the university.

The Ontario university system has evolved largely as a result of institutional initiatives with a minimum of planning and intervention

from the centre. By and large this has worked well. If there is need to examine the value of further differentiation, this examination should begin with institutional mission statements and the academic and financial plans universities have developed as means of fulfilling their missions. Institutional self-definition should remain the primary factor in determining role differentiation within the system; this process can be assisted by the activities of a voluntary association like COU. Council has always encouraged its member institutions to develop their own objectives and programmes in the light of other institutions' plans and of system needs; to consult broadly in the planning and development of programmes; and to involve COU in these consultations. It has endeavoured to improve cooperation and coordination among the institutions in ways that are appropriate to an organization that cannot assume decision-making responsibilities on behalf of the system. If some external agency is to be charged with the responsibility of reviewing institutional role definitions in the light of provincial needs, this task should be given to a buffer body, with ongoing responsibility for the health of the system. Further differentiation should evolve out of a process of dialogue under the mandate of the buffer body, and be achieved through incentive mechanisms rather than dictation and regulation.

Given the continuing desirability of maintaining a maximum degree of institutional autonomy, the means adopted to implement further differentiation should avoid legislative intervention, and instead

employ financial incentives. In assessing the potential value of using financial means for the promotion of further role differentiation among Ontario universities, however, it should be clearly recognized that it is not realistic to expect that greater differentiation, cooperation or coordination will contribute significantly to the solution of problems which have been caused by inadequate funding. Neither is it realistic to expect that greater differentiation will achieve any real savings through further economies of scale.

6. Funding Issues, the complex equation

Support of Universities

Two questions in the discussion paper focus on the respective roles of the federal and provincial governments in the support of higher education and research. In responding we draw heavily on Council's 1982 statement, Federal-Provincial Relations and Support for Universities.

Question 41 bears on the general political problem which has bedevilled the universities over the past few years, how better coordination between the two levels of government can be achieved in the definition of public objectives and in the support of universities. In the judgment of COU, a permanent arrangement is required which will oblige both governments to come together with representatives of the university sector in order to resolve the critical issues in which all parties have important interests.

New federal policies and programmes on post-secondary education could have major steering effects on the relationships between the provincial governments and the institutions. For instance, changes in the federal support of research through the granting councils could require adjustments in provincial mechanisms for university finance. It is essential, therefore, to provide for a process of dialogue, which will involve genuine communication and consultation on an on-going basis. For the necessary partnership to develop and be maintained, new statutory mechanisms will be required. Our suggestion is that the

federal government and the Council of Ministers of Education jointly create a Canadian Advisory Council for Higher Education and Research. Such a Council would be comprised of nominees from both levels of government, the university sector, and the public. Its functions would be:

- to serve as a forum for the articulation of national goals for higher education and research through a process of broad consultation and debate;
- to advise both levels of government on policies and programmes for the achievement of national goals;
- to monitor achievement of agreed goals and the general development of the higher education sector; and
- to issue public reports.

Such a national forum could embody a new spirit of partnership of the two levels of government together with the universities, for the achievement of national goals through the university sector.

Question 40 asks about the relative roles of the two levels of government in `core funding' and in the support and direction of research. This issue was explored at some length in our 1982 statement; we summarize briefly the arguments here. A primary concern should be the impact of policies of either level of government on the <u>whole university</u>. A view of the university as an agency which responds on demand in the short term to particular societal or governmental needs is too limited and potentially destructive. New channels of funding directed to specific purposes may be ill-conceived if the funds are withdrawn from the mainstream of nourishment for the university. This

would leave the universities in a weakened position, incapable of responding effectively to new challenges and equally incapable of maintaining the quality of continuing activities. The core activities of the universities, involving teaching and basic research across a broad spectrum of disciplines, are essential to their mission; every effort must be made to avoid jeopardizing these activities for specific programmes, however urgent.

Given the need to maintain adequate support for the core functions of the university, it is crucially important that the federal government continue to provide a substantial level of indirect support for the infrastructure. The clear statement by the federal government of its intention to maintain a major programme of transfers to the provinces for this purpose is reassuring. Still, it needs to be stressed that none of the specific federal objectives, such as those involving human resources, research, or accessibility, can be achieved without a strong infrastructure to support the core activities. A significant problem with the existing EPF arrangements is that they have permitted a weakening of this infrastructure through the lack of accountability and mechanisms for ongoing policy coordination.

Research

Research forms a part of the university's core undertaking. Its basic purpose is the extension of knowledge and understanding of the natural world and of man's history and culture. Since all faculty members are expected to be involved in research, financial support should be

provided through the infrastructure. In Canada both the provincial and federal governments contribute to financing this infrastructure. The most reasonable basis for apportioning these costs between the two levels of government would be to have provincial governments take full responsibility for the capital costs of the physical plant, for faculty salaries and for all of the indirect costs. The federal government would take responsibility for all of the direct costs of specific research projects, including major equipment and support for trainees. In addition, it would underwrite the indirect costs of research through transfer payments to the provinces, recognizing that by these means it will be providing a portion of the costs of faculty salaries as well as supporting general university operations. These transfer payments would be earmarked for universities but flow through the provincial granting mechanisms. (While direct costs, equipment and trainee support are proposed as areas of primary federal involvement, it is not intended that provinces should be excluded from these areas.)

Equipment funding deserves particular mention. One of the chronic problems in recent years has been that no agency has made provision for the replacement of equipment, for both research and undergraduate teaching, acquired as part of the capital cost of a building. The federal granting agencies should provide funding for the basic equipment costs of core research, including the funding of required new construction to house that equipment, as well as make provision for the replacement of equipment in due course.

Over the last few years, support for the infrastructure so essential to sustain active research programmes has declined significantly. The provision of an adequate level of funding for research equipment, for laboratory facilities and for libraries is essential for the health of our graduate programmes. The Ontario universities have reached the position where their capacity to respond to new initiatives is severely limited. The Commission speaks eloquently of the need for the universities to respond to new developments. The universities are prepared to accept that challenge; but they can do little unless the level of funding for the indirect costs of research is increased substantially. The need for action on this issue is urgent.

The pattern of funding proposed here conforms to the established convention of research funding in Canada. Recent practice, however, has departed from it strikingly, mainly due to the pressures of inadequate funding. For example, the universities have had to subsidize many of the direct costs of research projects, either because the grants from the federal agencies were unrealistically low, or in some cases because the granting council has required matching support from the university. At the same time, the federal granting agencies have established programmes for direct funding of salaries of faculty members because university budgets were not able to keep open career development opportunities for young scientists. When transfer agreements are being renegotiated, it should be possible to unravel these complications and

reestablish research funding on a better basis, one which clearly defines the respective roles in a way that is understood by all parties.

In addition to their core research activities, universities can be expected to continue to take on contract research projects dedicated to particular goals identified by the sponsor. The sponsors of such research will be found among the departments of government other than granting agencies and among private corporations. It is reasonable to assume that the sponsor should pay for all the direct and indirect costs of such research, including a `user charge' for major equipment. Further, charges might reasonably include the imputed capital cost for the building housing the laboratory concerned, with funds for these costs held in trust by institutions and applied as needed to contribute to major maintenance, alteration or replacement of buildings. If expansion of plant were required, this could be done by agreement between the university and an agency of government or a private corporation, and the basic operating costs of such facilities sustained by the sponsor rather than becoming part of the university's operating budget. These principles would apply to research parks as well as to special ancillary research institutes within the university.

After citing several factors which have combined to make the present funding arrangements for research unsatisfactory, the Commission asks whether funding for research should be separated from funding for instruction (Question 35). This would certainly accent institutional differentiation, but it would also produce a steering effect by

establishing a somewhat artificial separation of the two linked activities of teaching and research. This linkage is strongest at the graduate level, but even at the undergraduate level, the research involvement of the members of faculty provides the scholarly base on which the teaching programme rests. Further, it could provide particular problems for those institutions which are not `research intensive' as measured by outside funding. While it would free research intensive universities from the vicissitudes of low enrolment in doctoral programmes, separate funding for research might have other undesirable redistributive effects on institutional operating income. To be equitable, the introduction of a research funding unit would need to be part of a thoroughly revised approach to operating grants (see below). On balance, we view with concern the suggestion that a research funding unit be introduced with a corresponding reduction in the formula weight for graduate students. The Commission refers to a number of schemes that have been proposed over the years to effect such a separation; none has proved acceptable. While we recognize that the use of graduate enrolment as a proxy for research funding has its weaknesses, no better arrangement has yet come to our attention. The Ontario Council on Graduate Studies (OCGS) has advised us that it is opposed to establishing a separate Research Funding Unit.

Tuition Fee Policy

The Commission has been asked to recommend a tuition fee policy that reflects its proposed policy on accessibility and that provides an

equitable level of student contribution to the overall cost of the university system (section 6.4, Questions 37-39). Two main issues of principle arise as well as a number of matters of procedure. The essential questions are: "What share of the costs of a university education should fall upon students?" and "Who should set fees?". These questions should be considered together.

In the present reduced financial circumstances of the universities, there is agreement within the university community that a good case can be made for increasing fee income (including ancillary as well as tuition fees), providing the resultant revenues accrue to the institutions. In 1982-83, tuition fees (excluding visa differentials) accounted for 16.2% of university operating revenue. Since 1970 this percentage has ranged from 13.6% to 17.5%. In the mid-sixties it was around 25%. (It should be recognized, however, that there is considerable institutional variation around the system average, resulting from differences in programme mix and the discounting in the current funding formula.) Within Council a substantial majority accepts the desirability of a real increase in fees, given the pressing need to increase revenues in order to improve the quality of education. While not all share this opinion, all agree on several related points:

1) Since tuition fees impinge on accessibility, however difficult this may be to quantify, increases in fee levels must be accompanied by concommitant adjustments in student aid.

2) Real increases in fee levels should be staged so as to avoid sharp increases from year to year.

3) Adequate notice should be given to students, and a grandfathering approach is probably desirable.

There is considerable support within Council for an increase in formula fee differentials by programme. A strong case can be made for relatively higher fees for certain professional programmes, those characterized by second level entry, high cost, restricted access, and predictably high payoff to the individual. The differentials, however, would need to be determined by weighing real programme costs against a desirable degree of accessibility. Further, if greater differentials in fees for various programmes are introduced, the current four-year limit on the eligibility of students for grants should be abolished.

The second basic question is: by whom should tuition fee levels be set? Although responsibility for setting tuition fees legally rests with the governing bodies of the individual universities, effectively the Government establishes tuition fee levels through the operating grants formula. Further, the use of tuition fees in determining OSAP grant awards maintains a degree of government control over both accessibility (in its broadest sense) and the cost of student aid, an approach which recognizes that the proportion of education costs borne by the student is a matter of social policy. This arrangement precludes large increases in institutional tuition fee levels and undue competition among universities that might arise from the exercise of total fee autonomy. On the other hand, if the Government were to surrender its control over tuition fees and the resulting increased revenue from fees allowed to accrue directly to the universities, the freedom to establish tuition fees would provide individual institutions with

enhanced financial flexibility. This would strengthen institutional autonomy and enable universities to match their roles and objectives with the financial implications for students of increased fees. Such freedom would also force each institution to examine its options carefully. It could produce a much wider range of tuition fees.

Council supports maintenance of the principle of the formula fee. Half its members support greater institutional discretion to levy fees above the formula fee. As a tradeoff, the institutions exercising additional discretion to raise fees should be prepared to assume responsibility for student aid to cover the differentials between actual fees and the formula fee levels established by the Government as eligible for coverage under OSAP.

In its discussion on accessibility Council noted the recent dramatic decline in registration of international students resulting from sharp increases in tuition fees for this category of student. It would support a return to a more equitable treatment of such students. Ideally, they should be charged the same tuition fees as Canadian students. Council notes with dismay the movement in another jurisdiction in Canada to charge out-of-province students higher tuition than that charged provincial residents. Such a practice, which inhibits inter-provincial mobility, is to be deplored.

Operating Funds: Method of Allocation

The Commission identifies several possible methods of allocating operating funds. One would involve full deregulation, with public funding for instruction coming via vouchers to students who would use them to pay fees set by the universities. Council does not support this method. It could produce greater homogeneity, not differentiation, as institutions respond to student demand for popular programmes. It is predicated on the assumption that higher education is primarily a private good rather than a public good, and would not ensure that the social, economic and cultural goals set by our society are met by the universities. Moreover, it would dramatically increase instability in the system. The apparent enhancement of freedom through deregulation would likely turn out to be illusory; the law of the jungle would in fact constrain severely the ability of institutions to reach their autonomous objectives. Although much discussed, a full cost voucher system has never been successfully instituted in any jurisdiction.

Neither does Council support a return to the old days of wholly discretionary funding without a formula. While this may have worked satisfactorily in an earlier world, the advent of mass higher education with many more institutions having a claim to their fair share of support and the increased openness of our society have created a very different social context for university funding. A case can be made for discretionary funding in particular unique circumstances; but this element should be kept to an absolute minimum in any funding system.

Furthermore, discretionary funding should be allocated according to clearly stated public criteria.

The Council of Ontario Universities continues to endorse the principle of formula financing while being prepared to examine alternatives to the present version of the formula. Sound criteria for an allocative mechanism have been identified, and are laid out in the current Operating Grants Formula Manual and in OCUA Advisory Memorandum 82-XV. Council strongly endorses these criteria, which include the following elements:

1) For the universities, the formula will buttress institutional independence by ensuring a basic level of income to perform their core functions without the necessity of `line-by-line' scrutiny of their operating budgets, thereby providing maximum incentive and flexibility for effective management.

2) For the universities, the formula will provide stability by preventing extreme fluctuations in institutional income, and provide predictability as a more certain basis for planning.

3) For the granting body, by removing the necessity for scrutiny of operating budgets the formula will enable the body to devote its energy and attention to the major issues of the overall level of support and long-range planning.

4) For private donors, the formula will provide assurance that gifts will be added resources to the universities rather than a substitute for public support.

5) For the government and the public, the formula will provide accountability by linking funding to quantitative factors.

6) For all parties, the formula will provide, and be seen to provide, a reasonable amount of equity in the treatment of institutions.

7) For all parties, the formula will provide simplicity, that is, ease of use and understanding.

The present operating grants formula meets criteria 1 and 3-5 tolerably well. It cannot be described as simple or as easy to understand and use. Neither does it provide a very stable base for planning. A major defect, however, is the perception that it does not provide a reasonable amount of equity among the institutions in the system.

The present formula is simply an allocative mechanism. As originally conceived and implemented the formula was used both to set the total amount of the annual operating grant and to provide for the allocation of this sum among the institutions. First the value of the basic income unit (BIU) was established; then this was applied to the system weighted enrolment to derive the total operating grant. Now the total grant is determined first and the value of the BIU is derived by dividing the enrolment into this sum. As an allocative mechanism the formula was initially designed to respond to enrolment changes in a period of growth. Subsequently, when enrolment fell off in the late 70s substantial dampening (discounting of enrolment changes) was introduced to make its operation less volatile. In the current environment of constrained funding and strong enrolment pressure, the discount acts to reduce institutional incentives to growth. This has produced some perverse as well as some beneficial effects. For instance, the formula assigns a high formula weight to graduate students as a proxy for support of research, while at the same time it reduces this support through the heavy discounting applied to graduate enrolment changes. This has had a negative impact on graduate development. While discounting

cushions the effect of enrolment decline, it also provides a disincentive to growth in all areas, including those in which growth would be desirable. Moreover, when the value of the total grant is established without taking enrolment directly into account the formula acts to shift funds away from institutions that do not increase enrolment and to those that do, altering institutional shares in a way never intended in the original formula.

Without a substantial increase in resources, given continuing high student demand and a system that has reached capacity, the period we are now entering is likely to be characterized by relative stability in enrolment. In this context it is appropriate to examine whether a formula that is primarily enrolment based will best serve the needs of the Province for strong universities. Although all members of Council are agreed that there are problems inherent in the operation of the current formula, there is no consensus on how it should be modified. Some favour further discounting of new enrolment; some favour less. Others would like to see a more multi-dimensional approach, one that would provide each institution with base funding related to the institution's core commitments in both teaching and research. This would provide a means of funding research activities on other than a simple enrolment basis. It would take account of the essential research role of all universities and at the same time recognize the major commitments to research of some institutions, without moving to the Research Funding Unit (RFU) approach. Many would favour a funding approach that includes the notion of institutional capacity as described

in the institution's academic and financial plans. This would imply that the intermediate body would approve such plans and provide its allocative advice on this basis. Many would favour an approach that includes provision for matching grants for private support. All members agree that the formula should continue to provide supplementary grants for the support of bilingualism, and for institutional regional and distance responsibilities.

If a decision were made to develop a specific alternative to the present formula, extensive consultation should be provided for. COU would wish to be involved in this process and to have an opportunity to comment on the specifics.

Capital grants

More than a decade has now passed since the Government suspended the formula governing capital expenditure for Ontario universities. As a result, capital spending has declined markedly, from $98.7 million in 1972-73 to $25.8 million in 1983-84 ($9.7 million in 1972-73 constant dollars). Over this period three major factors have had an impact on universities' physical facilities: an expanding enrolment, shifting student programme preferences and a substantial increase in research activity. This has produced massive shortfalls in capital spending on repairs and renovations, alterations and new construction.

The people of Ontario have made a major investment in providing their universities with physical facilities which are presently worth some $3.5 billion. This investment needs to be protected and COU has demonstrated that the minimum level of annual capital funding for major building repair and renovation should be prudently set at a minimum of 1% of current replacement value. This generates a need for the 1984-85 fiscal year of $35 million.

In addition to funding requirements for major repair and renovation, however, an additional need exists for a recurrent capital provision for adaptation of existing physical plant to changing circumstances. Such need has been virtually unrecognized by the Government in its annual distribution of capital funds among universities. Yet the expectation remains that universities should be responsive to changing student demand, to increased research activity and generally to the flow of the technological revolution as it impacts on both teaching and research. COU believes that 0.5% of current building value should be set aside annually to fund adaptation of university physical plant. For 1984-85, this would generate the requirement of a further $17.5 million.

The final component of the capital funding equation is the requirements for new space. University space guidelines developed by COU in Building Blocks indicate a current space deficit amounting to 220,000 net assignable square meters. While uncertainties may exist with respect to long-term university space needs at the institutional and programme level, the definition of institutional enrolment capacity as

outlined elsewhere in this brief used in conjunction with COU Building Blocks standards should provide a means of estimating capital requirements for new construction.

At present, institutional difficulties in dealing with the major problem of capital underfunding are exacerbated by inefficiencies in the manner in which the inadequate funds are distributed. A new approach to capital funding is urgently needed which would:

1) formally recognize the overall level of capital funding needed to protect Ontario's major investment in university physical plant;

2) permit universities to plan their capital expenditures several years in advance;

3) take into account the variety of ages and conditions of buildings throughout the province; and

4) allow universities to plan and implement a programme of physical plant regeneration based on their own priorities.

With these objectives in mind and recognizing the need for a measure of complementarity between operating and capital funding, COU strongly urges that the buffer body be recognized as having responsibility for recommending not only the overall level of capital funding required but also for its distribution among universities. A COU brief on capital funding which addresses the matters in greater detail is included as Appendix E.

The Role of the Private Sector

Questions 42 and 43 and parts of questions 3, 36, 48, and 49 of the discussion paper deal in various ways with the role of the private

sector in support of universities. We will not attempt to answer these questions in detail, but wish to make certain general observations. Our view is that greater private sector support is desirable for several reasons: it increases university income, diversifies the sources of support, and encourages appropriate responsiveness to the needs of the private sector. Recent university activities in fund raising, the development of many university/industry cooperative arrangements, and increased dialogue with the private sector (e.g., the Corporate Higher Education Forum) bear witness to the priority universities now attach to this area.

Greater private sector support should not, however, be seen as a panacea for the fundamental problems of the universities. No matter how successful universities become in exploiting these avenues, the result will not have a major impact in compensating for inadequate funding of the system. Private sector support is generally only available for specified items or activities, rather than for the maintenance of core functions. This creates the danger of undue distortion of fundamental university priorities. Certainly the universities have a role to play in linking their research activity with industry for the betterment of society. But support for research through contracts with industry can only supplement the universities' core activities; it is no substitute for the support required for the basic research that is central to the university's mission.

A major turnaround in private sector contributions to the universities is unlikely without significant changes in the taxation regime for donations, and this is primarily a federal matter. Unfavourable comparisons are often made between the level of private sector support for universities in Canada and the United States, without taking account of the significantly more favourable tax treatment in the U.S. The Association of Universities and Colleges of Canada recently commissioned a paper from the accounting firm of Coopers & Lybrand. A number of possibilities for better tax treatment of donations are identified in this paper, and deserve to be carefully explored. They include broadening `Canadian cultural property rules', increasing the deduction or offering tax credits for contributions to scientific research, removing the 20% of income limitation, and exempting donations of corporate shares from deemed capital gains taxation. The paper is included as Appendix F.

7. Inter-institutional Planning and Coordination, a satisfactory structure

The Commission has been asked "to consider the need for mechanisms for regulation, coordination and the provision of advice to the Government, and in particular to clarify the role of the Ontario Council on University Affairs in the context of a new and differentiated university structure." COU supports the Commission's perspective on this aspect of its mandate: that it should seek "measures which will enhance quality, promote flexibility over the longer range, achieve the best program balance possible, and take due account of the important correlative issues of accountability and institutional autonomy." The challenge is to achieve a judicious balancing of these criteria in determining recommendations on the structure of the system.

Question 50 invites comments on eight options for meeting "the future planning and coordinating requirements of the university system in Ontario". The universities are agreed in rejecting options 1) direct Ministry management and 2) the University of Ontario. These options would not promote flexibility, and are unlikely to enhance quality. They would not allow a sufficient degree of institutional autonomy; neither would they provide for accountability, inasmuch as accountability requires delegation of authority rather than direct control. We do not believe that experience in other comparable jurisdictions provides convincing evidence that either of these approaches is likely to result in a more effective differentiated system.

At the other extreme the universities also reject option 8), the total deregulation approach which allows the institutions to charge 'full cost' and arms students with vouchers. As mentioned above, such a consumer-driven marketplace approach would only be valid on the assumption that higher education is primarily a private rather than a public good. It would not ensure that the social, cultural, and economic goals of society are met by our universities.

Option 6) challenges COU to undertake coordination of the system as an exercise in voluntary collective autonomy, under the threat of direct government intervention should this fail. Such a proposal was in fact promoted by COU itself in its responses to the draft and final reports of COPSEO in the early 70s. Subsequent experience, however, particularly with the programme of graduate discipline planning assessments, has led Council to the conclusion that a voluntary association of a collegial nature such as COU cannot and should not make planning decisions affecting its member institutions based on such criteria as need, duplication, and the appropriateness of a programme for a given institution. The situation of COU was well analysed in the Preliminary Report of the Committee on the Future Role of Universities in Ontario (CFRUO).

> ...because it is a voluntary association, COU possesses certain limitations. It cannot compel participation in any of its activities. Neither can it make any decisions that are binding on its member institutions without their consent. This means that COU is never in a good position to referee or to settle disputes between or among its members. It cannot easily adopt policies that are judged contrary to the interests of any of its members; and if it does adopt such policies, it cannot enforce them. Moreover, as

> the history of the past two years has shown, attempts by COU to assume such a role led to misunderstanding and suspicion among member institutions and a general weakening of the council. COU could be changed to enable it to perform executive functions on behalf of the system. But such a change would seriously reduce its ability to perform its other functions and, without a change in the legal powers of individual institutions, would leave the possibility of direct approaches to government when institutional or regional concerns were at variance with COU decisions.
>
> Reflection on such matters has led increasing numbers of members of the university community to conclude that COU is not the appropriate body to assume decision-making responsibilities on behalf of the system. To these considerations there should be added the argument that any such body representing the universities would not likely be accepted by government or by the public as credible when making decisions on which its members clearly were interested parties.

COU can and does play a significant role underpinning interinstitutional planning and coordination, without assuming responsibility for the process by exercising executive authority. Council at present provides a vehicle for:

- general consultation between agencies of government and the university community on system issues;
- the application of academic expertise on a peer judgment basis for monitoring programme quality (primarily at the graduate level);
- the exchange of information and views on institutional academic development plans (through regular meetings of the vice-presidents, academic);
- the undertaking of special studies on disciplinary development from time to time;
- research on the supply of and demand for highly qualified manpower.

All of these roles provide important, even essential, bases for an effective provincial planning process.

Option 5) is the status quo OCUA. The history of the past few years provides strong <u>prima facie</u> evidence that this is not satisfactory,

given the range of unresolved issues that led to the executive heads' 1980 brief to the Premier, the subsequent creation of CFRUO, and finally the appointment of this Commission. OCUA is an advisory body established by Order-in-Council with a broad, unclear mandate. To some extent, it has become a de facto regulatory body. The pattern of practice, however, is mixed. While the Minister has used OCUA in some areas, she has chosen not to involve it in others, e.g., OCUA was not asked to provide advice on visa student tuition fees prior to the Government's decision to increase them. When the Minister decided to freeze the funding of new undergraduate programmes, she simply announced the decision and asked OCUA to undertake responsibility for administering the freeze. OCUA has limited its role to a largely reactive one; it has in general given advice only when asked. Yet it need not feel so constrained. Its mandate is very broad and it can if it chooses provide advice to the Government on any matter affecting the universities.

OCUA has been a champion of university autonomy. Increasingly, however, it has seen Ontario universities as components of a system best administered by strengthening centralized planning. In the light of its view of the needs of the system, it interprets autonomy as requiring the individual institutions and COU as representing the collectivity to accept responsibility for planning the system and for seeing that it is managed responsibly within the resources made available for this purpose. To the extent that the individual institutions and COU are

seen as unwilling or unable to exercise this responsibility effectively, OCUA has shown itself increasingly willing to act as a regulatory agency. The creation in 1982 of an Academic Advisory Committee (with the support of COU) to advise OCUA primarily on approvals of new programmes is the most concrete demonstration of this trend.

The alteration in OCUA activities is readily explicable by reference to changing circumstances: the increasing pressures to improve system planning and coordination and to rationalize the system, resulting from continuing financial constraints, and the obstacles faced by COU in the attempt to fulfil the commitment to collective autonomy. But the change was not directly intended; neither was it planned. Now that it has occurred, however, the implications should be examined and the appropriate role of OCUA clarified. A strong case can be made that a body exercising such an important role should have its mandate clearly defined and authorized by statute, not merely established by a vague Order-in-Council as is currently the case. Similarly, it can be argued that if such a body is to exercise in practice the kind of power that OCUA has assumed, it should be assigned more than a strictly advisory role.

These considerations have led COU to examine elements of the remaining options. CFRUO, in its preliminary report, provided one of the most thoughtful approaches in recent years to the role of the buffer agency.

> If there is need in Ontario for a coordinating body in the academic program area at both the graduate and undergraduate levels, can such a role be effectively performed by OCUA? In recent years the

universities have been very reluctant to see OCUA granted such a role, in part because they remained unpersuaded of the need or of the desirability for any body outside of the universities to perform such a role, and in part because they perceived OCUA to be lacking the considerable academic resources required to make judgments on these matters that would be both sound and credible. But OCUA could be strengthened in order to fulfil a wider mandate.

Without altering its essential character as an advisory body, OCUA could, through its advice regarding the allocation of funds, assume a greater responsibility for the coordination of academic programming. In such a case, it would be desirable to specify more clearly the role of OCUA.

OCUA would continue to exercise de facto control through its recommendations on funding and other matters, while ministerial responsibility would be preserved and individual institutions would remain free, as at present, to argue their cases directly with government. At the same time, OCUA would continue to collaborate closely with COU, the individual institutions, and provincial organizations of faculty, staff and students. A high degree of institutional autonomy could be maintained. Each institution would continue to maintain and develop its academic programs subject only to limitations on program funding.

OCUA already has very broad terms of reference, but these could be made more specific if they expressly provided responsibility for offering advice on the funding of graduate and undergraduate programs, on the coordination of academic programming, including the introduction and dismantling of programs, and on enrolment levels and distribution, such advice to be given after review on the basis of specified criteria. Its role would be strengthened also if government were to request OCUA advice on all matters of policy directly affecting the universities or any of their academic programs prior to decisions to establish new faculties or schools, changes in admission levels in programs where the number of students is directly controlled by government, tuition fees policy (including fees for visa students), and modifications in the student aid program.

As well, it could be made clear that OCUA would have discretion to offer advice on any matter involving one or more universities in the system or the system as a whole. This would give to OCUA specific responsibility for recommending which new programs should be funded and which existing programs should cease to be eligible for funding.

OCUA could also be responsible for recommending enrolment levels for which public funding would be provided. These recommendations might be for total enrolment quotas for each institution or for enrolment quotas by program. As well, it could make

recommendations on library coordination and coordination in such other areas of large expenditure as computing and major scientific equipment.

CFRUO came down in favour of a strengthened advisory body with a clarified role. COU supports this approach. We propose that OCUA should be established by legislation. While remaining advisory, its role should be strengthened and clarified. OCUA should be responsible for:

- advising the Minister on all matters of general policy involving one or more universities or the system as a whole, including:
    - funding levels and allocation, including both operating and capital funds;
    - student aid;
    - tuition fees;
    - rationalization of programme offerings in the Province;
    - determination of programmes and enrolment levels eligible for government funding;
- approving institutional role statements and the associated plans for the development of instruction and research in the light of provincial objectives;
- monitoring the activities of COU in providing assurance of the quality of academic programmes at the graduate level;
- initiating studies related to the long-term development of the university system.

A key element in the execution of such a mandate should be a continuing and iterative dialogue between the institutions and the buffer body. Each institution would define a planned capacity related to its particular role in the system and indicate the resource base it judged necessary to fulfil this role. Institutional plans would then be reviewed

by the buffer body and, after further discussion, endorsed. The primary potential danger could be a tendency to develop institutional and system plans that were too detailed and remained too rigid over time. The poor experience with `master plans' in many American jurisdictions should alert us to these dangers.

Under this type of approach, institutions would be able to develop more fully their own mission statements and the academic and financial planning based on them in consultation with the agency responsible for the system, and to receive operating support that was consistent with those approved plans. An appropriate degree of flexibility would be retained if plans were subject to periodic review and, if, in the case of the variable funding component related to enrolment, it were based on approved enrolment levels subject to periodic review should too great a divergency occur between approved and actual enrolments.

Were OCUA to be given a more clearly defined responsibility for guiding the system, two important principles should govern its approach:

1) System policies should be reflected primarily through financial incentives and disincentives, not by dictated differentiation. Quality, flexibility, autonomy and accountability are better effected by financial levers.

2) The locus of planning responsibility should be left with the institutions. Individual institutions should retain responsibility for initiating the academic planning process, including enrolment planning. The buffer body should intervene only when an identified provincial interest is judged not adequately served by the summation of institutional plans. Examples are gaps and undesirable overlaps in programming, or major manpower concerns.

A sharpened and strengthened mandate for OCUA would necessitate a careful review of the way that body should fulfil the assigned role. It should become more proactive both by taking the initiative to tender advice to the Government on issues it judges to be important and by stimulating discussion of longer term policy and planning issues without offering specific advice. As well, the process by which it operates would require modification. OCUA should become more open, by publishing its advice to the Minister when tendered rather than after ministerial decision, as currently. The capacity of such a body to perform effectively will be dependent on the quality of both its membership and its staff resources. A clarified and strengthened role should make it possible to attract and retain persons of the highest calibre. The present modest staff would have to be expanded.

The key structural issue is the clarification of the responsibilities and authority of the intermediate body; a subsidiary question is whether the specified powers should be delegated or advisory to the Minister. On balance the universities would prefer an arrangement in which the intermediate body was given the central responsibility for monitoring the system and making judgments on policy, but with the Minister retaining final authority. Ministerial intervention should, however, be exceptional and restricted to issues determined by the Government to be of major significance. And the Government should accept the obligation to provide a statement of justification when it does so act. Within this perspective one mode of operation would be the current advisory

role; the other would be for the body to be given authority to act except where its decisions were appealed and overruled by the Minister. The latter would be preferable.

8. Conclusion, some further considerations

In the preceding sections of this brief, Council has developed its views on the issues raised by the Commission discussion paper within the financial limits proposed by the Government and accepted by the Commission, viz., that apart from the possible availability of a temporary Adjustment Fund, the present level of government financial support for the universities will be maintained. If these are all the financial resources that are made available, the universities will do their best to meet their manifold responsibilities within these limits. However, if there is to be a proper emphasis on quality (as the Government, the Commission and COU are all agreed there should be), it is very likely that this will mean the discontinuation of some things which are now being done and the failure to initiate some other things which might be done. This will create what Council has described as a future of missed opportunities. At this juncture, then, we should ask again: Is this what Ontario wants, or needs?

The Government is concerned with restraining expenditures within available resources. It does not explicitly consider reallocating resources from other spending areas to the universities or raising revenues. The Commission too is concerned with restraint. It notes that severe reductions in public funding for universities have been taking place in other countries, the Netherlands, the United Kingdom, Sweden and Australia, and in other provincial jurisdictions in Canada. What it fails to note is that even after these reductions, the level of

public support provided the universities in those jurisdictions remains above, in some cases substantially above, that which is being proposed in Ontario. Even after the recent traumatic reductions in grants to British universities, which were accompanied by the government's acknowledgement that the number of places would be cut despite an increase in the number of qualified applicants, the student/faculty ratio remains at less than 10:1 compared with 16.3:1 in Ontario. The funding of British universities on a FTE student basis remains about 35% above that in Ontario. A similar comparative picture can be drawn for Australia, Sweden and the Netherlands. In Canada the dramatic actions taken in Quebec and British Columbia to freeze and in some cases reduce total grants to universities still leave the institutions of higher education in those jurisdictions better funded than their sister institutions in Ontario. This year in the United States, several state governments have substantially increased their financial support to universities, thereby signalling an end to an extended period of reduced funding. In California, for example, funding for the state public higher education system, including the University of California and the California State University, has been increased by more than 20% for 1984-85 and an additional sum has been set aside in a special reserve for the University of California's retirement plan. These governments have realized the need to increase expenditures on higher education.

In the face of these facts, the point deserves to be made once again - public funding of Ontario universities is not excessive in terms of

their responsibilities. Indeed, they are comparatively poorly funded. If our universities are to play effectively the roles assigned them they need to be provided with resources above the level they currently receive. Improvements in institutional planning and programming, in interinstitutional cooperation and coordination, in system structures and metnods of funding allocation can be made, and if made will further enhance efficiency and effectiveness. These improvements should be made. None of them, however, will improve quality in any substantial way if the level of financial support for the university enterprise is inadequate. This central issue remains. It has not been addressed by the Commission in its discussion paper. When it is argued that the Province of Ontario cannot afford to increase spending on its universities, the immediate rejoinder should be: we cannot afford not to, so essential are these institutions to the future well-being of our people.

A P P E N D I X A

On Graduate Matters

Introduction - The Shape of the System

Graduate programmes are offered by all fifteen provincially funded universities and the Royal Military College. Ten of the universities offer doctoral programmes; five universities and RMC offer master's programmes only. The programmes offered cover a broad spectrum of academic and professional disciplines. Several are unique in Canada. The Ontario universities register about 40 percent of all the graduate students in Canada and grant about half of the doctoral degrees. Many of the doctoral programmes have achieved international recognition and some rank among the best in the world. Many of the master's programmes have also achieved recognition for their high quality. The Ontario system is unique in the degree to which the universities, through the Ontario Council on Graduate Studies (OCGS), have acted collectively to ensure that the graduate programmes are of good quality and that new developments are planned in an orderly fashion.

Quality - Assessment: A Matter of Appraisal
- Maintenance and Enhancement: A Matter of Resources

The academic quality of the graduate programmes offered by the Ontario universities is assured by a system of appraisals carried out by the Appraisals Committee of OCGS. The Appraisals Committee consists of twenty-one members of the professoriate of the Ontario universities and

operates in three sections. The members, who normally serve for three years, are chosen by OCGS from among those leading scholars in whose judgment the university system will have confidence. They are also chosen with a view to maintaining a reasonable balance among universities and disciplines, although the members act as individuals and not as representatives of their institutions or disciplines.

The Appraisals Committee was established in 1967. Initially it was principally responsible for reviewing new graduate programmes. The universities have agreed not to implement and OCUA will not consider for funding any new graduate programme that has not been successfully appraised. The Ministry of Colleges and Universities has accepted this procedure.

The standard appraisal of a proposed new graduate programme begins with the submission by the university of an appraisal brief. This document describes the proposed programme in detail and, among other things, includes an identification of the areas of specialization, with an estimate of enrolment, and a description of the resources available to support the programme. The latter includes the faculty members (current curricula vitae are always provided), library holdings, laboratory and computer facilities where applicable, and the support which the programme can expect to receive from collateral departments or other units in the university.

After reviewing the university's submission, the Committee selects external consultants to provide expert advice on the quality of the proposed programme. At least two consultants are required for a master's programme; three for a doctoral programme. The consultants are chosen by the Committee from a list of outstanding scholars in the field. An initial list of prospective consultants is provided by the university, to which the Committee can add. Not more than one consultant can be from another Ontario university and at least one consultant is usually chosen from outside Canada. This ensures that international standards of scholarship are used to evaluate the programme. The consultants review the university's brief and then visit the campus, normally for two days. Following this visit, during which they talk to faculty members and senior administrators, examine the library and the relevant supporting facilities, they submit their report to the Committee. The consultants visit and report independently of one another. The reports are confidential to the Committee, but are made available to the university on a confidential basis to enable the university to respond. In some cases the Committee may meet with representatives of the university to discuss any problems.

On the basis of the consultants' reports, the university's response and submission, and discussions with the university, the Committee recommends to OCGS either that the programme be approved to begin on a certain date; or be approved to begin subject to certain conditions; or not be approved. OCGS is not empowered to debate the substance of any recommendations; it can only challenge on procedural grounds. If OCGS

is satisfied that proper procedures were followed it approves the Committee's recommendations. If the university is not satisfied with the outcome it may appeal the decision. In the first instance the appeal is to the Executive Committee of OCGS. If the issue remains unresolved, the university may enter a second appeal which is heard by an appeal board consisting of three senior professors from the Ontario universities, one appointed by the Chairman of OCGS, one by the Chairman of COU, and one by the executive head of the university involved. The decision of the board is final. The final outcomes of all appraisals are reported to OCUA.

The Appraisals deal only with the assessment of quality. The Appraisals Committee is not concerned with such questions as whether there is a need for the programme, whether the programme duplicates existing programmes or whether there will be a demand for the graduates. During the 1970s Council carried out through the Advisory Committee on Academic Planning (ACAP) of OCGS, a series of discipline assessments which did address these issues as well as examine quality and led to a COU plan for the particular discipline. By 1982 assessments had been completed in twenty-six disciplines. In 1977, however, OCUA introduced planning criteria for funding new programmes which made the COU assessments largely redundant. Accordingly the programme of discipline assessments was discontinued.

At the same time as it discontinued its direct involvement in graduate planning, the Council expanded the appraisal process. In 1982 an extensive programme of periodic appraisals was introduced which requires that all graduate programmes in the system be examined by the Appraisals Committee over a seven year period. The periodic appraisals follow essentially the same procedures as the standard appraisals except that a number of additional factors are considered that are applicable to an existing programme, such as the academic record of the students admitted to the programme, the quality of theses produced, and the success of the graduates. Also, during their campus visits the consultants talk to students as well as to faculty and administrators. There is one other important difference. If the programme under review has been previously appraised, or assessed during a discipline assessment, the Committee may decide that the programme is of satisfactory quality on the basis of documentary evidence, without the advice of external consultants. If the programme has not been previously appraised or assessed, consultants must be used.

These periodic reviews will identify the programmes that are of good quality and those that have not maintained an acceptable level of quality. The latter may require only minor improvements to reach a standard of 'good quality', in which case the university will have to decide whether to commit the necessary resources to the programme to improve it; or they may require major improvements, in which case the programme must be closed down until such time as it can pass a new

appraisal. We know of no other jurisdiction that has undertaken such an extensive and rigorous examination of its graduate programmes.

Over the years the appraisals system has had a profound impact on the quality of the graduate programmes in Ontario. Because of the requirement that programmes undergo external appraisal, the universities have strengthened their own internal assessment procedures. As a consequence, a new programme is seldom put forward for appraisal until the university is confident that it will be approved. The periodic appraisals have extended the process to all existing programmes. This requires the universities to make internal decisions with respect to the allocation of resources to support their graduate programmes at an acceptable level of quality or phase them out. The result has been much stronger graduate programmes across the Province.

While the assessment of quality is a matter of appraisal and the cyclical review will ensure that only programmes of good quality continue to operate, the enhancement and maintenance of quality is a matter of resources. If the universities do not have the resources, quality will deteriorate, and eventually some programmes will have to be closed down. The periodic appraisals have already identified some programmes which have in the past enjoyed a world-wide reputation for excellence which the universities are unable to maintain. Senior scholars of international repute retire and are not replaced; library collections cannot be kept current; laboratory equipment cannot be purchased; new young research scholars cannot be hired. The picture is

one of a system in decline as each university cuts and prunes its programmes to fit its decreasing resources.

It is clear that, unless an adequate level of funding is provided, some graduate programmes that are still among the best in the world will be unable to maintain that position, and some programmes that are now of good quality will have to be closed down. If that is allowed to happen, the consequences for the Ontario universities, for the Province, and for Canada would be serious indeed, since Ontario provides such a large proportion of the highly qualified manpower that the country needs.

APPENDIX B

COU Committee on Distance Education

Commentary on Ontario Universities 1984 -- Issues and Alternatives

> Upon the education of the people of this country the fate of this country depends.
> Benjamin Disraeli: House of Commons, 15 June 1874

It is interesting to note that the words attributed to Disraeli were uttered precisely 110 years, to the day, before the Council of Ontario Universities received for discussion the paper prepared by The Commission on the Future Development of the Universities of Ontario. The Council's Committee on Distance Education has discussed (June 25) the paper at some length and offers the comments which follow, Part I being a general discussion of distance education, and Part II specific comments in the same order as the topics appear in the paper.

Part I

We begin by observing that instruction and learning at the university level do not, indeed cannot, go on only in a classroom. Classroom-free learning has long been known as a response to the needs of various groups of learners. It is one of the "persistent issues of a socio-cultural type" that there are many--the handicapped, the native peoples, those who live in remote places in Ontario, those with household responsibilities (young children, aged relatives), and others--who

cannot possibly attend in the classrooms to which they could qualify for admission. These people must not be denied the opportunity to learn, and to become part of the better educated populace--the first of the five objectives recalled by the Commission.

Means now exist whereby the above-mentioned people can be served, wherever they live, through the distance education opportunities now available from many of the Ontario universities. These are would-be students, the great majority of whom are beyond the 18-24 age group so much in the minds (and in the tabulations) of demographers. They are the often overlooked adult learners, 25 years of age and up. Also included in this adult age group are women and men, some of them employed, who live in urban centres. For some, it is not geographic distance but work schedules or required travelling which makes classroom-free learning the only choice. For others that mode of learning is a deliberate first choice. To all these people the availability of desired courses by distance education techniques is a veritable boon, as indicated by the high concentration of distance education students in urban areas.

Whether urban or rural or remote, the people to whom we refer are deeply interested in learning. To some, the motivation is a university degree; to others, an increasing proportion, some of whom already hold a university degree, the motivation is the improvement of qualifications (up-grading) for advancement in employment or, even, for employment.

Strongly motivated, they are eager to seize convenient opportunities to learn, and they respond effectively to the chance to become genuine students working with the instructor in ways somewhat different from the classroom, but effective nevertheless. This effectiveness stems from distance learners using course materials of increasingly high standards, in terms of both substance and methods.

The carefully organized course material consists generally of printed matter augumented by audio and/or video and/or electronic means of communication: cassettes, disks, computers. The more traditional postal and telephone services enable intercommunication with a mentor (or tutor) for the student to submit assigned exercises and to receive comments upon them. And whatever the physical distance between student and instructor, the contact in some cases has been found to be even closer than in the classroom.

It will be obvious that a professor offering a course by distance techniques must be meticulous in the organization of the subject matter, commonly in collaboration with other members of a course design group. It is this collaboration which helps assure the high quality of the substance and the methods mentioned above. Not surprisingly, it is reported that the classroom versions of distance courses are often much improved as a result of carrying over this high organization of the distance material. Some instructors have even bought for use in their own classrooms materials used for distance courses by other instructors elsewhere. The strides being taken in designing courses for distance

education can be expected to affect other kinds of, say, part-time courses. For example, audio-teleconferencing, so important a technique in some distance courses, is a useful infusion into other, more traditional, kinds of classes. And it provides for access to leading scholars throughout North America, without the expense of bringing them to Ontario.

Because distance education activities are intermingling with the more familiar modes of education it would be outdated in educational terms and patronising in learner terms to view distance education as a kind of backwater or eddy in the river of learning. It is, in fact, well within the currents of the mainstream. Technologies which enhance distance education can also enhance the traditional modes of education; and however exciting such developments may be, educators have to contemplate them not from the standpoint of immediate cheapness, but from that of longer-range cost-effectiveness--not for distance education alone, but for education (especially higher education) at large.

Part II

Preface

It seems likely that some universities will continue active development of their distance education efforts, but that others will prefer, at least for a time, to concentrate on the traditional classroom approach, whether for full-time or part-time students. Some of these may in fact

be interested in making non-degree education, such as professional development, available by distance techniques.

Introduction

1.3.2 Objectives - The reference to a "more educated populace" we recognize to be not the Commission's wording; we do, however, suggest consideration of the qualitative implications of better, rather than the quantitative more.

Quality

In Question 2, with regard to the deployment of resources, we urge that off-campus as well as on-campus deployment be borne in mind. The former represents both `education-at-a-distance' (as in off-campus centres) and `distance education'. These are not at all the same thing, although the distinction is not always grasped.

In Questions 4 and 5, with regard to information and communications, there is no doubt that new technologies and networks, enabling improved instructional potential for distance education students, would be welcomed. With regard to research, we are aware that computer conferencing networks, some of them world-wide, have already demonstrated their value in the rapid communication and exchange of research findings--even negative findings being helpful in identifying non-productive lines of inquiry.

Accessibility

In response to Question 7 on future enrolment levels, we note that the discussion in 3.1.2 pertains basically to the 18-24 age group, drawing attention to the `double cohort' phenomenon. We wish to direct attention to the 25-and-up age group, for whom distance education provides a very real opportunity of access to university-level studies. This is a group which is rapidly growing as the need for upgrading becomes an increasingly important factor. The students involved in this activity are less likely to be degree candidates; as many as 30 per cent are already graduates of some degree programme.

Questions 8, 9, and 10, dealing with admission requirements for general education, likewise apply to the 18-24 age group, from which only a small percentage of distance education students come. In discussing a reported anomaly at one university, where the Grade 13 requirement has become higher than that at Grade 12, it was pointed out that both part-time and full-time students had to meet the same standard. The part-time student in this age group (or indeed of whatever age) is not to be regarded as a second rate academic citizen--whether an on-campus, an off-campus, or a distance education student.

In pondering 3.2.1 and 3.2.2 we noted the use of the term requisite capacity, which struck some of us as being a less than felicitous synonym for capability. Even capability alone is insufficient--it needs to be accompanied by drive or desire.

Question 11, on alternatives, does seem to require comment in respect of the adults who wish to undertake university studies. There appears to be widespread reliance on in-course screening; but less with regard to graduating than with permitting continued registration. It does seem strange to raise the matter of graduation in the context of admission. Surely undergraduates still have the right to fail, just as they have the right to succeed—if they have the capability and the desire or drive to apply themselves. And even if they cannot achieve the degree, surely they are better educated members of the populace than they would otherwise have been! They are by no means a dead loss.

Questions 13, 14, and 15 specifically pertain to distance education, but it would be a great pity if the context were to be interpreted as implying that distance education, indeed, all part-time studies, represents an alternative adequate for adults and (as in Question 13) the `college age group' for whom no `first choice' university or programme is open. An attempt has been made, in Part I of this commentary, to set out something of the scope and the role of distance education. It is worth emphasizing that the students enrolled in distance education courses are enrolled because, whatever their circumstances, they have the determination and the drive to achieve—even though the way seems long, and there may be few like-minded people with whom to socialize.

Specifically, on Question 13, distance education can be quite dissociated from the notion of localization in the first part of the

question--technological developments are not bound by geographic limits. If the motives of the 'college age group' applicant are adequate, and the capability and the drive are there, the fact that the applicant is not 25 or more would not be a barrier. What is important is that the applicant understand the implications of distance education.

Question 14 pertains to those outside the 'college age group', and the question supposes that accessibility is a problem for these students. In response, it should be pointed out that accessibility is not the problem; being 25 or older, such students are regularly admissible, understanding that there will be in-course screening to determine continuation. That screening necessitates the provision of adequate student support services. Thereby the student in distance education is enabled to enjoy the advantages of counselling and advice as effective as those for students in the traditional classes. For the mature students, if they really want an opportunity, distance education provides that opportunity--NOT as a second choice, but as a preferred choice. Because they cannot attend on a full-time basis, they are necessarily part-time--but they are far from being second rate! Graduates in part-time programmes are among the most loyal alumni in our universities; without their leadership at least some universities would face an added set of problems in these years.

As to Question 15, the future demands for part-time study opportunities, whatever the mode of learning, can be expected to continue to grow. In a society in which the crying need for employment opportunities seems

bound to out-pace the need for employees, having in mind the traditional concept of a work-week, it seems inevitable that the human (and humane) dignity of employment will require reduction of the weekly hours of work—per worker. In such circumstances, the need for upgrading, for recurrent education, will require universities to provide such avenues. For some, perhaps for many, such studies will be possible only by distance education. In other cases the subject matter providing for skill enhancement or for career change may be made available as post-degree courses through the collaborative efforts of professional bodies and educational institutions (including universities).

With regard to Question 22 on Franco-Ontarian accessibility it seems clear that the technology exists by which courses could be given in the French language, where the demand justifies. Such courses are being offered at off-campus centres even now. Whichever universities might be prepared to undertake which kinds of courses and programmes is surely a matter for their decision.

Question 23 on what, interestingly enough, is referred to as `other groups', has, we think, been addressed in the early part of this paper. It is given primacy of place by distance educators because they see the problems as being pressing in light of our new vision of Human Rights!

Adaptability

In 4.1. on the importance of adaptability, the fourth paragraph notes the need for diffusion of research results. It is worth reiterating here a point made earlier about the adaptation of technologies useful in distance education to the wide and rapid publication of such information. The growing practice of world-wide computer conferencing indicates the importance of undertaking the support of ventures to provide for this additional kind of intellectual exchange; cost-effectiveness arising out of the fact that the same equipment would be used for distance education.

Balance and Differentiation

With regard to differentiation, we think it is important to emphasize that the education of adult students ought to be a mission of every university in the province--whether or not distance education is the manner in which that mission is discharged. The universities engaged in distance education pursue their activities in different ways, emphasizing different technologies. The differences may well reflect the facilities which are available, or they may reflect differences in emphases in the on-campus academic programmes. It should be emphasized that distance education is not a stand-alone enterprise; the professors involved in preparing course materials commonly base those materials on the courses for which they are responsible on the campus. And their learnings from the one mode are transferred to the other. This hybridization occurs also within the distance courses, where several technologies are combined in order to provide to the distance

student the best possible experience. Another kind of hybridization which one would hope for, and work toward, is the collaboration of universities whereby students in distance courses of one university could have access to the student support services of a nearby university which had not been able to meet their subject needs directly. The important factor, of course, is again that of providing the student with the best possible experience.

Funding Arrangements

Finally, as to funding arrangements, we wish simply to comment upon 6.7.4 in relation to the broader issues of distance education costs, inescapable in any university, whether for course preparation or for the equipment to put a course on. These initial costs need not recur in the life-time of the course—generally a relatively low-cost continuing operation. We suggest that consideration be given to the feasibility of establishing a kind of rotating facilitation fund from which contributions to these up-front costs could be made, to be repaid year-by-year on an amortization schedule.

A P P E N D I X C

COU Committee on Enrolment Statistics and Projections

Revised Enrolment Projections

Introduction

The CESP report Participation Rates and Future Enrolment in Ontario Universities was published in September 1983. The report presented a detailed review of historical participation rates for the postsecondary sector, comparing participation rates in Ontario with those of other Canadian provinces and other countries. Factors which might influence future levels of enrolment were examined. In particular, the effects of shifts in the labour market and changes in higher education policy were looked at. Of special concern to Ontario universities is the expected impact on enrolment resulting from changes in the Province's secondary education system. CESP employed a computerized enrolment model to develop a series of enrolment projections in the 1983 paper. This second report presents revised projections, and also highlights certain trends that are expected to influence participation rates over the next decade.

Changes in the Model

A detailed description of the operation of the CESP enrolment projection model was presented in the appendix to the 1983 report. As only one

structural change in the model has taken place, the description will not be repeated. Those wishing to examine the detailed presentation should refer to the 1983 report.

In the 1983 version of the model, single year of age participation rates were adjusted for each year of the simulation by means of a rate of change factor. In order to keep the number of rates of change limited, only five age ranges were permitted. This restriction has been removed in the present version of the model which employs single year of age rates of change. This change permits a greater degree of flexibility in running the model and should generate more realistic values.

The revised series of projections incorporates an additional year of actual enrolment data. Detailed enrolment data for 1982-83 have been added to the historical data base and 1982-83 now becomes the base year in the model. As there were enrolment increases in 1982-83 at the full-time and part-time undergraduate levels and at the full-time graduate level, there were corresponding increases in the participation rates for many of the age groups at these levels.

The final change in the revised version of the model, and the one that produced the greatest impact, was a change in the population base. The population projections in the earlier model used 1976-based intercensal estimates. The current projections are based on the 1981 census data and are part of a series of eighteen projections produced by the Population Projections Section of Statistics Canada. The projection

selected as most appropriate by CESP differs in a number of ways from the 1976-based estimates. In the earlier projection, the fertility rate was assumed to decrease from a value of 1.8 in 1976 to a value of 1.6 by 1991 and then to remain constant. In the current projection, the present fertility level of 1.7 is assumed to remain constant for the entire projection period. This has no impact on projected enrolment. Somewhat lower mortality rates in the current projection also have little impact on enrolment. Estimates of net migration into Ontario (the net effect of both international and internal migration) are of some significance, however. In the 1976-based projection, net migration was assumed to be around zero in the first half of the 80s, rising to +10,000 by the end of the decade, and then remaining constant. In the current projection, net migration is assumed to rise from +23,000 in 1983 to +52,000 in 1993, and then remain constant.

Taken together, these factors have resulted in higher population estimates during the entire projection period and, as a result, serve to produce higher enrolment levels. The 1981 census also gave rise to revised intercensal estimates for the period 1977-1980. The 1976-based population projections overestimated the 17-21 year old population during this period. Use of the lower actual population figures for this age group has resulted in higher historical participation rates than had previously been estimated. These higher participation rates, when coupled with the projected higher population counts described above,

produced higher enrolment levels in the current projections than was the case in the 1983 projections.

Enrolment Projections Assumptions

As mentioned in the previous section, 1982-83 is the base year used in the CESP enrolment projection model, being the latest year for which actual enrolment data by single year of age are available. To run the model it is then necessary to project future values of the participation rates by single year of age. To begin this process, a modified exponential smoothing technique was used to estimate participation rates in 1983-84, 1984-85 and 1985-86. These rates were then adjusted to produce total enrolment figures that matched the total enrolment figures available for 1983-84 and the CESP projected total enrolment figures for 1984-85. (The 1984-85 projections were derived for the COU Committee on Operating Grants.) The model was then run holding participation rates constant at their 1985-86 values. The resulting curves are labelled `constant' in the figures.

In the 1983 enrolment projections, minimum and maximum projections were presented in addition to the projection based on constant participation rates. These minimum and maximum scenarios were based on the observed historical minimum and maximum participation rates. For the current enrolment projections, CESP has again chosen to present a `range' in which future enrolment levels might be expected to occur. However, a different procedure has been selected for the current projections. It is based not only on the extremes in participation rates but also reflects

the current levels of the participation rates. For each single year of age category, participation rates for the period 1976-77 through 1985-86 were examined and the difference between the maximum and minimum values derived. Target values of the participation rates at the `high' end were then estimated by taking the 1983-84 participation rate and adding one-half of this difference. Target values at the `low' end were based on the 1983-84 value minus one-third of the difference. (The different proportions were chosen because current rates are close to the high value.) The results are presented in Tables 3 and 4 for full-time undergraduate enrolment and in Tables 6 and 7 for full-time graduate enrolment.

In the enrolment projection model the target values of the participation rates are inserted for some year in the future. The model smooths participation rates, beginning in 1985-86, to these target values. The participation rates are then held constant for the remainder of the projection period. Selection of the target year to be employed is dependent on the variation between the 1984-85 participation rates values and the target values - the greater this difference the longer the smoothing period.

From Tables 3 and 4 for full-time undergraduates, it can be seen that, for a large number of age groups, the constant rate values are at or near the maximum values. Accordingly, a 3 year smoothing period was selected. On the other hand, there are large differences between the

constant and minimum values. A 7 year smoothing period was taken to be more appropriate in this case. At the full-time graduate level, Tables 6 and 7 show that the constant values of the participation rates tend to fall roughly midway between the maximum and minimum values. Consequently, a 5 year smoothing period was chosen for both the high and low projections. Tables 5 and 8 present participation rate values for part-time undergraduate and part-time graduate enrolment respectively. As there are many factors that could lead to either increases or decreases in future levels of part-time enrolment at both the undergraduate and graduate levels, the resultant degree of uncertainty prompted CESP to employ only constant participation rates in the current projections.

A major factor affecting enrolment levels in the later part of the present decade, particularly at the full-time undergraduate level, will be the resultant effects of the implementation of ROSE in Ontario secondary schools. A procedure for simulating these effects on university enrolment was incorporated in the 1983 projections. As very little additional information on the expected effects of ROSE has been forthcoming, this procedure has not been changed in the present projections.

Description of the Projections

Figures 1-5 and Tables 1-2 present the revised enrolment projections. Because of the uncertainty surrounding visa student enrolments at the

present time, CESP has made no attempt to incorporate visa students in its revised projections.

The relative magnitude of the ROSE peak is illustrated in Figure 1, which shows full-time undergraduate enrolment using high, constant and low participation rates. This suggests that accommodating additional students in the late 80s and early 90s will be a problem. The projected peak illustrates only the phased `double cohort´ effect of ROSE. There may also be an increase in the total number qualified for university entrance if more students select advanced level courses in the early years of high school.

The constant projection is close to the high, reflecting high actual participation rates in recent years. A renewed appreciation of the value of higher education and an unfavourable labour market for young people are contributing factors. The university participation rate for females has continued to increase at the undergraduate level. It now matches or exceeds that of males for some age groups. If constant participation rates are maintained, full-time undergraduate enrolment will peak in 1990-91 at 157,824, 13% above the 1982-83 level and then drop to a low of 125,261 by 1998-99 (Table 1). This low point is, in fact, only 10% below actual 1982-83 enrolment.

Various labour market and cost factors affect undergraduate participation rates. Improved employment prospects for high school graduates could lower participation rates, but the CESP sees little

evidence of this occurring in the next few years. As the youth cohort declines, competition for entry-level jobs will lessen. However, it is thought that the introduction of new technology, particularly in manufacturing, will reduce the number of desirable middle-level jobs, producing a bi-modal labour market with a top level needing high levels of education and training, and a low-skill, low pay service sector. The reduced youth cohort may also lead to increased relative wages for the university educated, which would encourage higher participation rates.[1]

Conversely, continued high unemployment would make it more difficult for students and their families to meet the direct costs of postsecondary education. Participation rates could decrease, especially for lower income groups.

Expansion of non-university educational alternatives, reduction or expansion of university programme capacity and increases or decreases in direct costs of attendance could also influence demand. The willingness of students to undertake higher direct or indirect costs is affected by their perception of the return on education, which is influenced by parental or societal attitudes as well as by realistic knowledge of relative wages and other quantifiable economic evidence.

1. Discussed by David K. Foot and Barry Pervin, "The Determinants of Postsecondary Enrolment Rates in Ontario," Canadian Journal of Higher Education, Vol XIII, no. 3 (1983), 1-22.

After considering these factors, CESP concluded that, barring significant changes in the educational system, the economic scenario for the foreseeable future suggests a continuation of the present high participation rates. Socio-cultural factors, such as increased participation rates for women and some ethnic groups, will also tend to keep demand high, as will increased education levels of the parent population, since children of better-educated parents have significantly higher postsecondary attendance.

Figure 2 is a summary of full and part-time enrolments using constant participation rates. Part-time enrolments have increased consistently during the historical period, and this trend is not likely to be reversed.[2] As part-time undergraduate students are drawn from a wide age range, the constant part-time line reflects the gradual aging of the baby-boom population. In the past, teacher education was a significant component of part-time enrolment. This component is expected to decline, but technological change and strong government interest in upgrading and retraining could be off-setting factors. Part-time education may also be an attractive leisure time activity, if shorter work days or weeks become more common. The ability of universities to meet increased demand may depend on more innovative credit programmes, particularly in business and scientific disciplines.

2. A recent Statistics Canada study concludes that part-time participation will remain stable or increase. See R. Belanger, D. Lynd and M. Mouelhi, Part-time Degree Students: Tomorrow's Majority?, Ottawa, Statistics Canada, 1982.

Figure 3 shows three projections of full-time graduate enrolment. The broken line on the top left represents actual full-time enrolments including visa students. This suggests that increased Canadian participation, perhaps to the level of the high projection, could be accommodated, given recent experience, although visa student enrolment has of course varied by programme and institution. While the graduate projections do not incorporate the ROSE assumptions, they will be affected by them to some degree, allowing for a time-lag. The constant projection reflects both demographic change and the continuation of relatively high recent enrolments. Some factors that could affect projected participation rates are participation rates for women increasing to approximate those of men, as is now the case at the undergraduate level; increased support for disciplines thought to be in high demand; and a weak labour market for graduates with bachelor's degrees.

The constant projection only is shown for part-time graduate enrolment. The influencing factors are similar to those for part-time undergraduate. There is probably a trade-off between full and part-time enrolment for many graduate students, depending on availability of jobs or fellowships.

Figure 4 is a summary of total enrolment. The ROSE peak appears in all three scenarios. In the low projection, the enrolment trough does not match the recent historical low of 1978-79. Stable part-time and graduate enrolments lessen the impact of the demographic decline for

full-time undergraduates. Complete enrolment data for Figure 4 appears in Table 1.

Figure 5 is a summary of Full-Time Equivalent enrolment. Full-time undergraduate enrolment is a relatively larger component of FTE enrolment than is the case in the head-counts used in Figure 4. Thus, in Figure 5 the ROSE peak and subsequent decline is quite sharply defined, even in the low participation rate scenario. But as may be seen in the Table 2 data for total FTE enrolment, constant participation rates have a potential for maintaining a high level of enrolment throughout the projection period. The peak in 1990-91 is 203,142, 13% above the 1982-83 level. From this peak total FTE enrolment declines to a low of 170,064 in 1998-99. This is a drop of 16% from the peak, but it is only 5% lower than 1982-83 enrolment, and about 5% higher than the 1978-79 trough.

Conclusions

The 1984 CESP projections support earlier analysis of the probable counterbalancing effect of graduate and part-time enrolments on the anticipated `baby-bust' decline in full-time undergraduate enrolment.[3]

3. D.K. Foot, "A Troubled Future? University Enrolments in Canada and the Provinces", in D.M. Nowlan and R. Bellaire (eds.), Financing Canadian Universities: For Whom and By Whom?, Toronto, OISE Press, 1981.

In addition, the ROSE impact and a variety of labour market factors may lead to higher full-time undergraduate enrolments than previously assumed. From about 1989 to 1992, the universities and the Government will be faced with the problem of accommodating the ROSE peak. One effect of this peak is to delay the demographically-induced decline until the mid-90s. Then, the decline itself is smoothed by stable undergraduate and part-time enrolments.

It should be noted that the enrolment projections presented in this paper are based on anticipated student demand for places in Ontario universities. The system is virtually filled to capacity at the present time. Without increases in funding and physical capacity, it is unlikely that the universities would be able to accommodate that part of projected demand which is clearly above current levels. If present funding remains constant, future levels of enrolment would be determined by the number of available places in universities, rather than by actual societal demand.

Table 1

SUMMARY OF ENROLMENT PROJECTIONS
(Constant Participation Rates)

		UNDERGRADUATE				GRADUATE				TOTAL	
		FULL-TIME		PART-TIME		FULL-TIME		PART-TIME			
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
HISTORICAL	1976-77	132646	0.0	58373	0.0	12228	0.0	11189	0.0	214436	0.0
	1977-78	130534	-1.6	65126	11.6	12586	2.9	11630	3.9	219876	2.5
	1978-79	126176	-3.3	66791	2.6	12397	-1.5	11384	-2.1	216748	-1.4
	1979-80	126396	0.2	70860	6.1	12098	-2.4	11418	0.3	220772	1.9
	1980-81	129636	2.6	73828	4.2	12211	0.9	11479	0.5	227154	2.9
	1981-82	133535	3.0	77052	4.4	12650	3.6	11237	-2.1	234474	3.2
	1982-83	139257	4.3	83080	7.8	13230	4.6	11241	0.0	246808	5.3
PROJECTED	1983-84	146624	5.3	84044	1.2	14172	7.1	11185	-0.5	256025	3.7
	1984-85	152723	4.2	87081	3.6	14672	3.5	11243	0.5	265719	3.8
	1985-86	152156	-0.4	88702	1.9	15061	2.7	11358	1.0	267277	0.6
	1986-87	148735	-2.2	89993	1.5	15324	1.7	11581	2.0	265633	-0.6
	1987-88	145232	-2.4	91040	1.2	15536	1.4	11818	2.0	263626	-0.8
	1988-89	142921	-1.6	91722	0.7	15643	0.7	12014	1.7	262300	-0.5
	1989-90	151226	5.8	92242	0.6	15617	-0.2	12191	1.5	271276	3.4
	1990-91	157824	4.4	92720	0.5	15480	-0.9	12341	1.2	278365	2.6
	1991-92	152197	-3.6	93266	0.6	15318	-1.0	12459	1.0	273240	-1.8
	1992-93	145317	-4.5	93755	0.5	15169	-1.0	12538	0.6	266779	-2.4
	1993-94	138236	-4.9	94177	0.5	15093	-0.5	12595	0.5	260101	-2.5
	1994-95	133817	-3.2	94455	0.3	15073	-0.5	12660	0.5	255955	-1.6
	1995-96	127421	-4.8	94676	0.2	14915	-0.7	12708	0.4	249720	-2.4
	1996-97	126387	-0.8	94808	0.1	14765	-1.0	12730	0.2	248690	-0.4
	1997-98	125659	-0.6	94925	0.1	14616	-1.0	12727	-0.0	247927	-0.3
	1998-99	125261	-0.3	94866	-0.1	14489	-0.9	12689	-0.3	247305	-0.3
	1999-00	125630	0.3	94798	-0.1	14399	-0.6	12665	-0.2	247492	0.1
	2000-01	126408	0.6	94683	-0.1	14301	-0.7	12644	-0.2	248038	0.2
	2001-02	127377	0.8	94579	-0.1	14221	-0.6	12609	-0.3	248788	0.3

Table 2

SUMMARY OF FTE ENROLMENT PROJECTIONS
(Constant Participation Rates)

		UNDERGRADUATE				GRADUATE				TOTAL	
		FULL-TIME		PART-TIME		FULL-TIME		PART-TIME			
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
HISTORICAL	1976-77	132646.0	0.0	16543.3	0.0	12228.0	0.0	3729.7	0.0	165147.0	0.0
	1977-78	130534.0	-1.6	18587.9	12.4	12586.0	2.9	3876.7	3.9	165584.6	0.3
	1978-79	126176.0	-3.3	19045.6	2.5	12397.0	-1.5	3794.7	-2.1	161413.3	-2.5
	1979-80	126396.0	0.2	20157.6	5.8	12098.0	-2.4	3806.0	0.3	162457.6	0.6
	1980-81	129636.0	2.6	20824.8	3.3	12211.0	0.9	3826.3	0.5	166498.1	2.5
	1981-82	133535.0	3.0	21737.4	4.4	12650.0	3.6	3745.7	-2.1	171668.1	3.1
	1982-83	139257.0	4.3	23464.0	7.9	13230.0	4.6	3747.0	0.0	179698.0	4.7
PROJECTED	1983-84	146624.0	5.3	23727.6	1.1	14172.0	7.1	3728.3	-0.5	188251.9	4.8
	1984-85	152723.0	4.2	24584.8	3.6	14672.0	3.5	3747.7	0.5	195727.5	4.0
	1985-86	152156.0	-0.4	25006.0	1.7	15061.0	2.7	3786.0	1.0	196009.0	0.1
	1986-87	148735.0	-2.2	25311.3	1.2	15324.0	1.7	3860.3	2.0	193230.6	-1.4
	1987-88	145232.0	-2.4	25519.5	0.8	15536.0	1.4	3919.3	2.0	190226.8	-1.6
	1988-89	142921.0	-1.6	25608.5	0.3	15643.0	0.7	4004.7	2.2	188177.2	-1.1
	1989-90	151226.0	5.8	25659.5	0.2	15617.0	-0.2	4063.7	1.5	196566.2	4.5
	1990-91	157824.0	4.4	25723.9	0.3	15480.0	-0.9	4113.7	1.2	203141.6	3.3
	1991-92	152197.0	-3.6	25831.6	0.4	15318.0	-1.0	4153.0	1.0	197499.6	-2.8
	1992-93	145317.0	-4.5	25937.0	0.4	15169.0	-1.0	4179.3	0.6	190602.3	-3.5
	1993-94	138736.0	-4.9	26023.4	0.3	15093.0	-0.5	4198.3	0.5	183550.7	-3.7
	1994-95	133817.0	-3.2	26059.6	0.1	15023.0	-0.5	4220.0	0.5	179119.6	-2.4
	1995-96	127421.0	-4.8	26081.5	0.1	14915.0	-0.7	4236.0	0.4	172653.5	-3.6
	1996-97	126387.0	-0.8	26089.5	0.0	14765.0	-1.0	4243.3	0.2	171484.8	-0.7
	1997-98	125659.0	-0.6	26107.0	0.1	14616.0	-1.0	4242.3	-0.0	170624.3	-0.5
	1998-99	125261.0	-0.3	26084.3	-0.1	14489.0	-0.9	4229.7	-0.3	170064.0	-0.3
	1999-00	125630.0	0.3	26060.1	-0.1	14399.0	-0.6	4221.7	-0.2	170310.8	0.1
	2000-01	126408.0	0.6	26030.9	-0.1	14303.0	-0.7	4214.7	-0.2	170956.6	0.4
	2001-02	127377.0	0.8	26011.9	-0.1	14221.0	-0.6	4203.0	-0.3	171814.9	0.5

Table 3

PARTICIPATION RATES FOR FULL-TIME MALE UNDERGRADUATES

AGE	MINIMUM	MAXIMUM	CONSTANT	HIGH	LOW
UNDER 18	0.00114	0.00220	0.00114	0.00173	0.00085
18	0.02744	0.04214	0.03425	0.03760	0.02535
19	0.15466	0.16575	0.16575	0.16751	0.15826
20	0.16554	0.18575	0.18575	0.18657	0.16972
21	0.15701	0.17010	0.16475	0.16807	0.15716
22	0.12764	0.14170	0.14170	0.14354	0.13182
23	0.07494	0.09122	0.08436	0.08819	0.07462
24	0.04341	0.05913	0.05675	0.05836	0.04526
25	0.02742	0.03495	0.03425	0.03377	0.02749
26	0.01812	0.02725	0.02725	0.02732	0.01971
27	0.01248	0.01574	0.01510	0.01562	0.01290
28	0.00958	0.01116	0.01065	0.01127	0.00995
29	0.00641	0.00871	0.00821	0.00933	0.00741
30	0.00508	0.00707	0.00673	0.00758	0.00592
31	0.00384	0.00535	0.00487	0.00556	0.00430
32	0.00310	0.00448	0.00448	0.00496	0.00381
33	0.00242	0.00372	0.00372	0.00407	0.00299
34	0.00181	0.00246	0.00181	0.00228	0.00173
35	0.00149	0.00219	0.00218	0.00246	0.00188
36	0.00114	0.00242	0.00242	0.00284	0.00177
37	0.00092	0.00131	0.00120	0.00140	0.00107
38	0.00079	0.00123	0.00098	0.00120	0.00083
39	0.00054	0.00101	0.00101	0.00125	0.00085
40	0.00054	0.00125	0.00125	0.00145	0.00085
41-45	0.00036	0.00065	0.00065	0.00074	0.00049
46-50	0.00017	0.00036	0.00036	0.00043	0.00027
51-55	0.00009	0.00015	0.00011	0.00014	0.00009
56-60	0.00005	0.00010	0.00008	0.00011	0.00006
OVER 60	0.00005	0.00011	0.00011	0.00013	0.00008

Table 4

PARTICIPATION RATES FOR FULL-TIME FEMALE UNDERGRADUATES

AGE	MINIMUM	MAXIMUM	CONSTANT	HIGH	LOW
UNDER 18	0.00127	0.00280	0.00127	0.00216	0.00088
18	0.03901	0.05562	0.04125	0.04806	0.03421
19	0.16507	0.19780	0.19780	0.20533	0.17805
20	0.16104	0.19880	0.19880	0.20984	0.17837
21	0.13773	0.16175	0.16175	0.16757	0.14755
22	0.09135	0.12552	0.12552	0.13354	0.10506
23	0.04165	0.06380	0.06380	0.06743	0.04897
24	0.02118	0.03520	0.03520	0.03736	0.02568
25	0.01355	0.01733	0.01685	0.01824	0.01509
26	0.00951	0.01335	0.01335	0.01437	0.01117
27	0.00700	0.00680	0.00803	0.00917	0.00767
28	0.00553	0.00745	0.00745	0.00825	0.00665
29	0.00465	0.00588	0.00516	0.00602	0.00499
30	0.00388	0.00648	0.00648	0.00728	0.00511
31	0.00324	0.00429	0.00390	0.00443	0.00355
32	0.00262	0.00442	0.00442	0.00511	0.00361
33	0.00260	0.00372	0.00372	0.00415	0.00322
34	0.00228	0.00303	0.00303	0.00332	0.00269
35	0.00217	0.00281	0.00235	0.00267	0.00214
36	0.00194	0.00326	0.00326	0.00361	0.00251
37	0.00171	0.00227	0.00200	0.00228	0.00181
38	0.00163	0.00223	0.00190	0.00230	0.00180
39	0.00115	0.00218	0.00218	0.00264	0.00178
40	0.00123	0.00189	0.00189	0.00216	0.00161
41-45	0.00081	0.00131	0.00131	0.00152	0.00110
46-50	0.00051	0.00071	0.00071	0.00081	0.00064
51-55	0.00024	0.00029	0.00026	0.00029	0.00024
56-60	0.00005	0.00018	0.00018	0.00024	0.00013
OVER 60	0.00002	0.00005	0.00005	0.00007	0.00004

Table 5

PARTICIPATION RATES FOR PART-TIME UNDERGRADUATES

AGE	Male			Female		
	MINIMUM	MAXIMUM	CONSTANT	MINIMUM	MAXIMUM	CONSTANT
UNDER 18	0.00009	0.00019	0.00019	0.00014	0.00025	0.00025
18	0.00074	0.00100	0.00100	0.00141	0.00208	0.00173
19	0.00349	0.00478	0.00384	0.00476	0.00711	0.00675
20	0.00677	0.00980	0.00980	0.00986	0.01414	0.01355
21	0.01161	0.01478	0.01428	0.01527	0.02156	0.02150
22	0.01931	0.02405	0.02405	0.02234	0.03142	0.03142
23	0.02303	0.03067	0.03067	0.02273	0.03394	0.03394
24	0.02454	0.02795	0.02795	0.02463	0.03237	0.03237
25	0.02208	0.02560	0.02560	0.02386	0.02830	0.02830
26	0.02197	0.02323	0.02231	0.02430	0.02845	0.02845
27	0.02043	0.02185	0.02062	0.02431	0.02673	0.02489
28	0.01954	0.02103	0.02055	0.02321	0.02643	0.02515
29	0.01957	0.02061	0.02061	0.02339	0.02643	0.02341
30	0.01812	0.02065	0.02010	0.02391	0.02660	0.02412
31	0.01531	0.02043	0.01842	0.02226	0.02779	0.02475
32	0.01322	0.01903	0.01833	0.02082	0.02705	0.02703
33	0.01387	0.01772	0.01678	0.02189	0.02863	0.02863
34	0.01311	0.01826	0.01770	0.02159	0.02849	0.02711
35	0.01119	0.01676	0.01655	0.02047	0.02994	0.02480
36	0.01064	0.01724	0.01724	0.01965	0.03215	0.03215
37	0.00869	0.01455	0.01455	0.01816	0.02453	0.02450
38	0.00755	0.01258	0.01225	0.01762	0.02618	0.02618
39	0.00754	0.01098	0.01098	0.01387	0.02477	0.02461
40	0.00656	0.01068	0.01068	0.01380	0.02466	0.02461
41-45	0.00491	0.00804	0.00804	0.01094	0.01893	0.01882
46-50	0.00317	0.00464	0.00464	0.00711	0.01145	0.01145
51-55	0.00158	0.00239	0.00239	0.00403	0.00603	0.00603
56-60	0.00110	0.00146	0.00131	0.00239	0.00310	0.00290
OVER 60	0.00057	0.00120	0.00118	0.00071	0.00135	0.00134

Table 6

PARTICIPATION RATES FOR FULL-TIME MALE GRADUATES

AGE	MIN	MAX	CONSTANT	HIGH	LOW
UNDER 18	0.00000	0.00001	0.00000	0.00000	0.00000
18	0.00000	0.00001	0.00000	0.00000	0.00000
19	0.00000	0.00004	0.00000	0.00000	0.00000
20	0.00004	0.00016	0.00004	0.00010	0.00000
21	0.00064	0.00143	0.00064	0.00107	0.00041
22	0.00429	0.00659	0.00447	0.00547	0.00355
23	0.01052	0.01440	0.01133	0.01309	0.00986
24	0.01252	0.01631	0.01399	0.01586	0.01270
25	0.01105.	0.01474	0.01359	0.01511	0.01203
26	0.00951	0.01204	0.01023	0.01142	0.00931
27	0.00835	0.01124	0.00863	0.00999	0.00758
28	0.00720	0.00906	0.00775	0.00868	0.00713
29	0.00576	0.00729	0.00645	0.00711	0.00583
30	0.00499	0.00671	0.00665	0.00740	0.00597
31	0.00365	0.00557	0.00438	0.00525	0.00365
32	0.00318	0.00433	0.00385	0.00427	0.00331
33	0.00267	0.00344	0.00344	0.00363	0.00298
34	0.00200	0.00278	0.00236	0.00275	0.00210
35	0.00141	0.00233	0.00154	0.00222	0.00145
36	0.00109	0.00292	0.00292	0.00344	0.00191
37	0.00098	0.00144	0.00098	0.00129	0.00091
38	0.00090	0.00113	0.00091	0.00102	0.00082
39	0.00067	0.00097	0.00082	0.00090	0.00065
40	0.00068	0.00106	0.00106	0.00123	0.00091
41-45	0.00044	0.00063	0.00063	0.00070	0.00054
46-50	0.00019	0.00031	0.00031	0.00035	0.00025
51-55	0.00011	0.00017	0.00014	0.00015	0.00010
56-60	0.00004	0.00009	0.00005	0.00008	0.00003
OVER 60	0.00001	0.00003	0.00003	0.00004	0.00002

Table 7

PARTICIPATION RATES FOR FULL-TIME FEMALE GRADUATES

AGE	MINIMUM	MAXIMUM	CONSTANT	HIGH	LOW
UNDER 18	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.00000	0.00001	0.00000	0.00000	0.00000
19	0.00000	0.00001	0.00000	0.00000	0.00000
20	0.00005	0.00013	0.00008	0.00012	0.00005
21	0.00071	0.00119	0.00118	0.00131	0.00091
22	0.00373	0.00484	0.00430	0.00456	0.00363
23	0.00774	0.00879	0.00843	0.00891	0.00803
24	0.00726	0.00997	0.00997	0.01116	0.00890
25	0.00529	0.00707	0.00707	0.00796	0.00648
26	0.00428	0.00762	0.00762	0.00901	0.00623
27	0.00342	0.00503	0.00456	0.00523	0.00388
28	0.00304	0.00466	0.00466	0.00533	0.00398
29	0.00222	0.00409	0.00386	0.00466	0.00310
30	0.00212	0.00436	0.00436	0.00513	0.00326
31	0.00181	0.00269	0.00269	0.00306	0.00233
32	0.00144	0.00224	0.00224	0.00257	0.00190
33	0.00155	0.00236	0.00236	0.00265	0.00197
34	0.00138	0.00206	0.00178	0.00204	0.00147
35	0.00095	0.00176	0.00167	0.00201	0.00133
36	0.00105	0.00223	0.00223	0.00266	0.00168
37	0.00112	0.00169	0.00149	0.00184	0.00136
38	0.00085	0.00185	0.00185	0.00223	0.00140
39	0.00079	0.00195	0.00195	0.00232	0.00135
40	0.00082	0.00124	0.00124	0.00144	0.00109
41-45	0.00042	0.00102	0.00102	0.00127	0.00077
46-50	0.00033	0.00055	0.00055	0.00062	0.00044
51-55	0.00010	0.00024	0.00024	0.00031	0.00019
56-60	0.00006	0.00011	0.00007	0.00010	0.00005
OVER 60	0.00002	0.00005	0.00005	0.00007	0.00004

Table 8

PARTICIPATION RATES FOR PART-TIME GRADUATES

AGE	Male			Female		
	MINIMUM	MAXIMUM	CONSTANT	MINIMUM	MAXIMUM	CONSTANT
UNDER 18	0.00000	0.00001	0.00000	0.00000	0.00000	0.00000
18	0.00000	0.00001	0.00000	0.00000	0.00001	0.00000
19	0.00000	0.00003	0.00000	0.00000	0.00006	0.00000
20	0.00000	0.00003	0.00000	0.00000	0.00010	0.00000
21	0.00002	0.00014	0.00011	0.00003	0.00015	0.00003
22	0.00027	0.00065	0.00027	0.00025	0.00062	0.00025
23	0.00157	0.00208	0.00179	0.00105	0.00180	0.00131
24	0.00306	0.00487	0.00306	0.00225	0.00286	0.00230
25	0.00416	0.00635	0.00416	0.00286	0.00350	0.00346
26	0.00555	0.00756	0.00561	0.00312	0.00387	0.00359
27	0.00474	0.00843	0.00474	0.00278	0.00421	0.00278
28	0.00386	0.00887	0.00386	0.00307	0.00396	0.00341
29	0.00558	0.00920	0.00558	0.00296	0.00397	0.00343
30	0.00575	0.00975	0.00590	0.00290	0.00374	0.00320
31	0.00543	0.00892	0.00543	0.00247	0.00356	0.00333
32	0.00479	0.00773	0.00479	0.00195	0.00359	0.00327
33	0.00411	0.00715	0.00411	0.00232	0.00315	0.00254
34	0.00450	0.00678	0.00450	0.00210	0.00310	0.00283
35	0.00320	0.00615	0.00320	0.00196	0.00277	0.00210
36	0.00392	0.00555	0.00497	0.00185	0.00284	0.00282
37	0.00347	0.00462	0.00420	0.00176	0.00255	0.00250
38	0.00304	0.00403	0.00304	0.00175	0.00249	0.00201
39	0.00225	0.00379	0.00225	0.00124	0.00292	0.00289
40	0.00267	0.00330	0.00327	0.00126	0.00254	0.00254
41-45	0.00181	0.00205	0.00181	0.00110	0.00192	0.00192
46-50	0.00083	0.00120	0.00108	0.00081	0.00133	0.00133
51-55	0.00044	0.00056	0.00054	0.00037	0.00057	0.00052
56-60	0.00021	0.00030	0.00022	0.00019	0.00033	0.00033
OVER 60	0.00005	0.00008	0.00005	0.00002	0.00006	0.00004

Figure 1
Summary of Full-Time Undergraduate Enrolment
Including ROSE

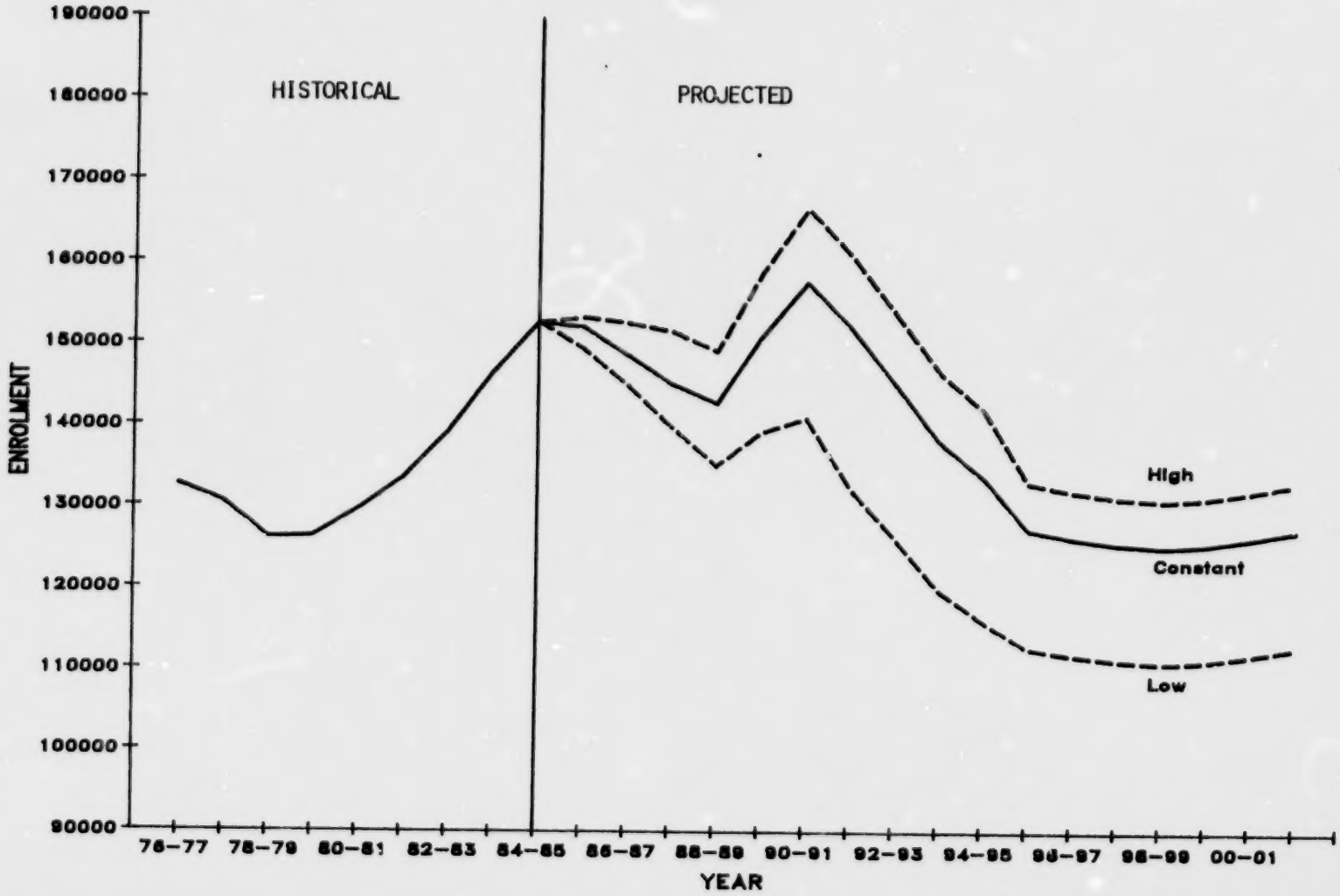


Figure 2
Summary of Full-Time and Part-Time
Undergraduate Enrolment

Constant

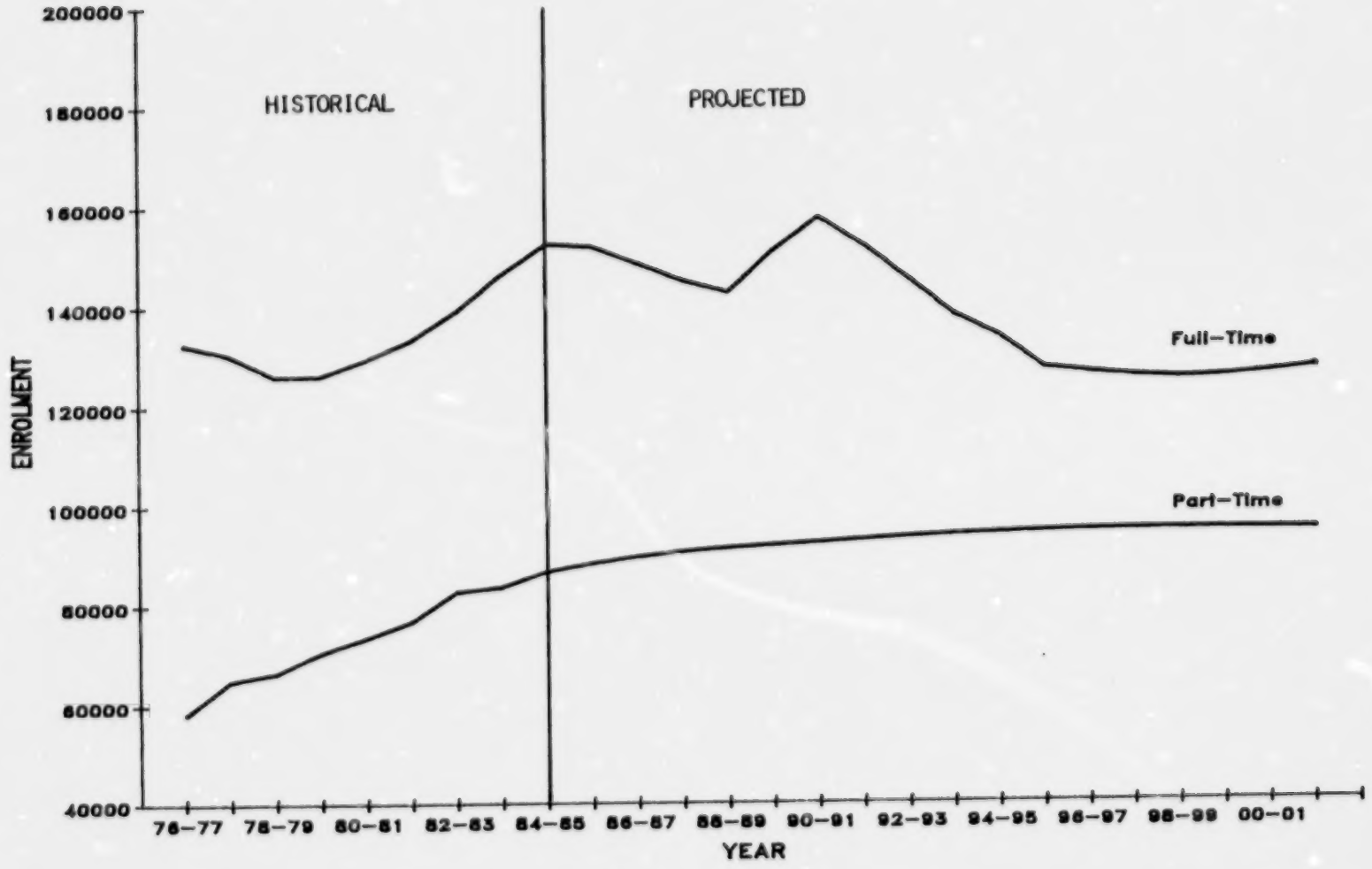


Figure 3
Summary of Full-Time and Part-Time
Graduate Enrolment

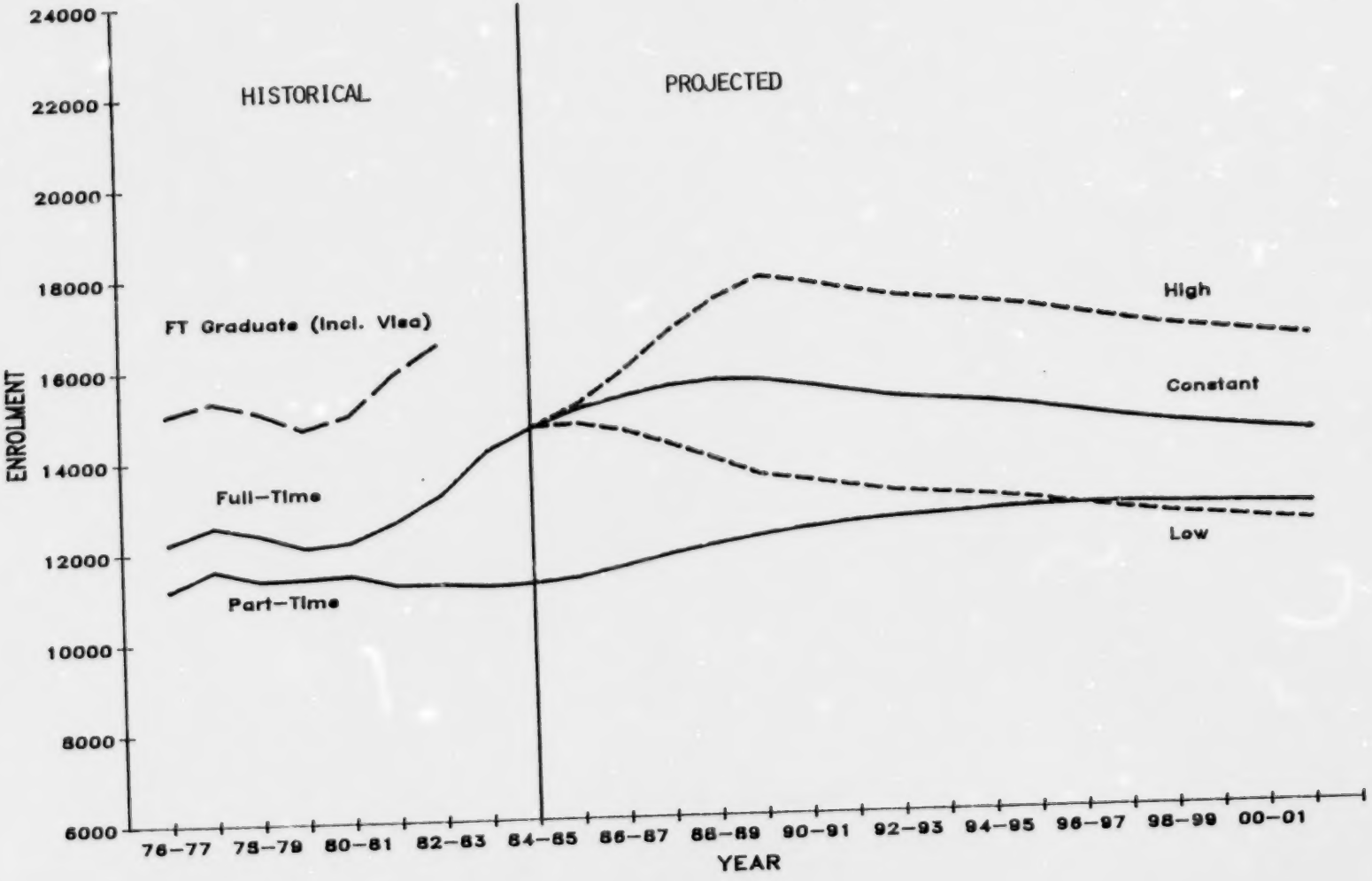


Figure 4
Summary of Total Enrolment
Including ROSE

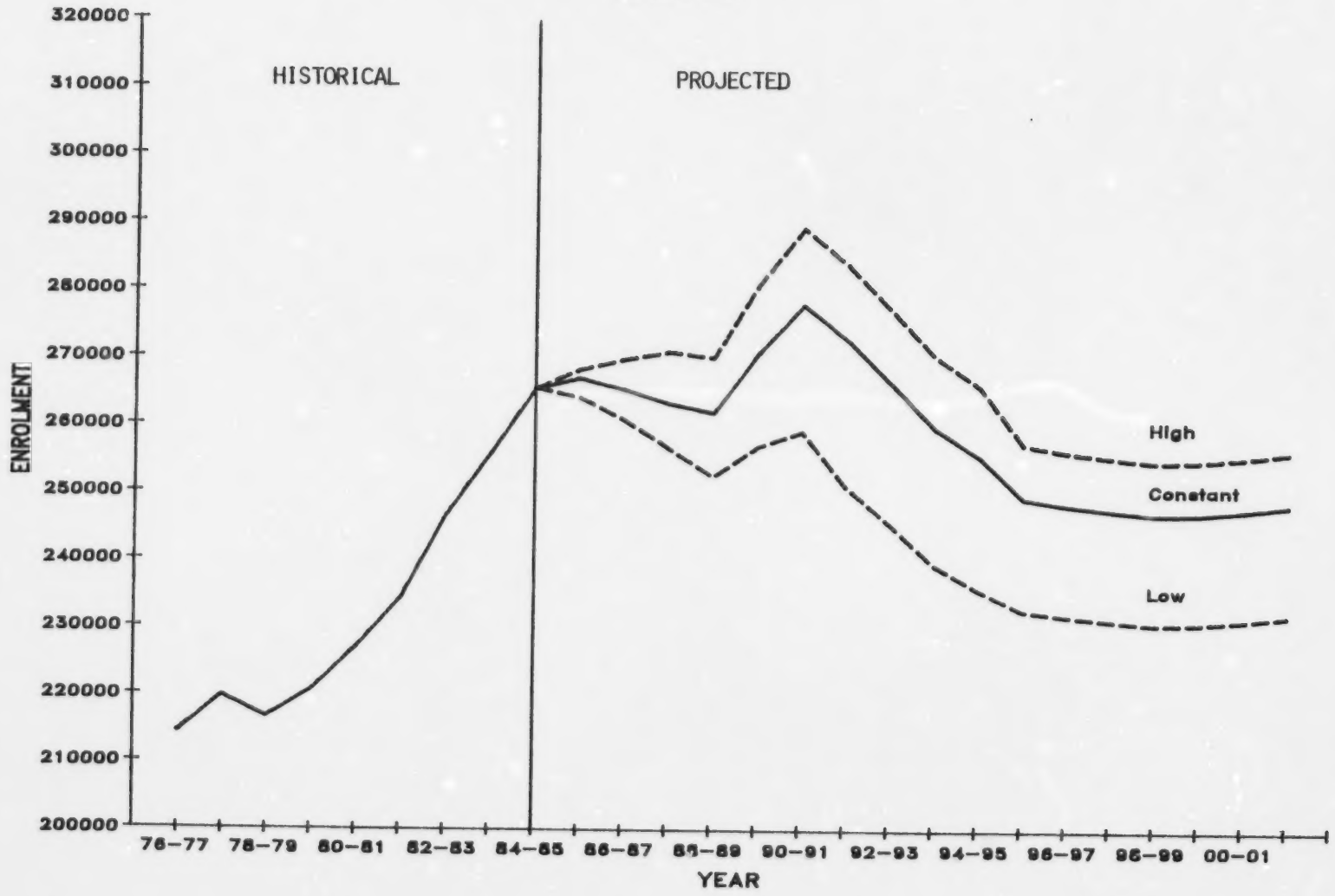
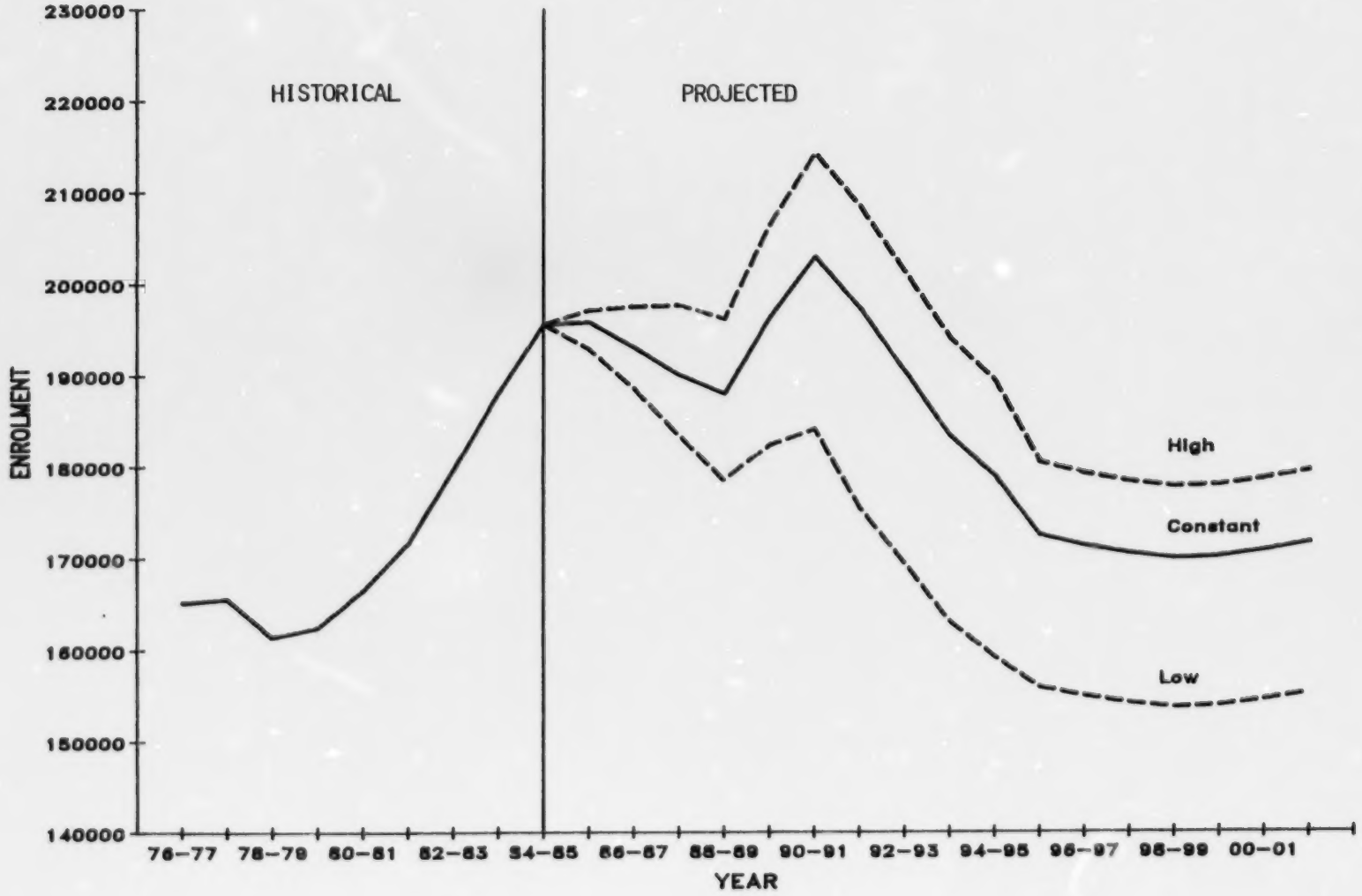


Figure 5
Summary of FTE Enrolment
Including ROSE



A P P E N D I X D

ON THE END OF COMPULSORY RETIREMENT

TO FOLLOW

APPENDIX E

ON CAPITAL GRANTS

Introduction

More than a decade has passed since the Government of the Province of Ontario suspended the formula governing capital expenditure for Ontario universities. As a result, capital funds from all government sources have fallen from $98.7 million in 1972-73 to $25.8 million in 1983-84 ($9.7 million in 1972-73 constant dollars). During the same period three major factors have had an impact on the universities' physical facilities: an expanding enrolment, shifting student programme preferences and an increase in research activity. Since 1972-73, university enrolment has risen by almost 40%; there have been major shifts in academic programme offerings to meet student demand; and the volume of research activity, both basic and applied, has grown by 55% measured in constant dollars.

This brief is intended to demonstrate the extent to which the capital requirements of the universities have been neglected by government over the past decade and to document the extent of current needs which result from this long period of neglect. Failure to embark upon a renewal of the universities' physical plant will have both short-term and long-term negative results. In the short term the relatively inefficient use of these expensive facilities will continue; in the longer term the requirements and the cost of repairs and alterations to existing

facilities will continue to grow and new construction requirements will remain largely unmet.

Enrolment Changes - The Past Decade

As shown in Figure 1, between 1972-73 and 1983-84 full-time equivalent enrolment in Ontario universities increased by about 40%. Compared with the explosive growth in enrolment experienced in the 60s, the decade of the 70s and the early 80s may be seen as a time of relative stability. This appears to be the view of the Government of Ontario, since over the period it has allowed the total level of operating grants to universities to deteriorate in constant dollar terms by almost 20% on a per student basis.

This view is mistaken. Enrolment has grown significantly; there have also been major shifts in enrolment by discipline. Figure 2 displays full-time undergraduate enrolment by major academic discipline area in 1972-73 and in 1982-83. Enrolment in arts and science has declined from 64.6% of the total to 55.5% over the period, but there have been major increases in two other areas: commerce and business administration and the applied sciences. Recently, this enrolment pattern has stabilized, not as a result of reductions in student demand, however, but because of the universities' inability to accommodate larger numbers of students. Despite continuing high student demand, underfunding of both their operating and capital needs have caused the universities to limit enrolment.

Enrolment Changes - The Next Decade

Projections of future university enrolment in Ontario are complicated by uncertainties over the effect of the current renewal of secondary school education through OSIS. In the view of the COU Committee on Enrolment Statistics and Projections, however, the most likely scenario projects an FTE enrolment that peaks in 1990-91 some 13% above the 1982-83 level followed by a decline to a trough in 1998-99 some 5% below the 1982-83 level. These projections are displayed in Figure 3.

Given these projections, there appears to be very little justification for any assumption that a major decline in university enrolment is inevitable between now and the end of the century. Indeed, the `base case´ projection developed by COU has been criticized as too cautious. An alternative set of projections prepared by David K. Foot and Barry Pervin suggests that, "on average, enrolment rates in postsecondary institutions in Ontario are likely to increase substantially over the 1980s" and that "the often-anticipated decline in postsecondary enrolments in Ontario and elsewhere, which reflects in large part the projection of the elementary and secondary school experience into post secondary education, will not materialize and current public policy towards postsecondary institutions must be careful to incorporate this information."[1]

1. David K. Foot and Barry Pervin, "The Determinants of Postsecondary Enrolment Rates in Ontario", The Canadian Journal of Higher Education, Volume XIII, Number 3, page 19.

Basic and Applied Research

Increased university activities in the areas of both basic and applied research have also placed considerable pressure on universities' physical plant. As Table 1 indicates, the amount of sponsored research funds relative to operating funds has increased considerably. Since the capital freeze was imposed in 1972, the proportion of the two funds represented by research revenue has increased from 12.2% to 17.2%. In constant dollar terms the value of the total sponsored research funds has increased by 55%.

This additional research activity on the part of the universities is generally applauded. But it has placed additional strains on both the physical and the financial resources of the universities. Despite the increased volume of research activity, the absence of sufficient capital funding has permitted very little construction for research purposes and little adaptation of existing physical facilities. Now, for the first time in more than a decade, the availability of appropriate space has become a major factor in institutional decisions to take on further research commitments.

Capital Funding During the Past Decade

As Table 2 and Figure 4 demonstrate, the value of capital grants received from all provincial government sources is only a tenth of what it was in 1972-73, the year the capital freeze was imposed. Grants have replaced long-term debentures and other ministries have replaced MCU as

the principal source of funds. Despite evident growing need, the constant-dollar value of funds made available by the Ontario government has been about the same in every year since 1978-79.

Ontario universities are not alone in suffering under a severe shortage of capital funding. The Ontario government has restricted each year throughout the past decade its level of capital investment in this province. As Table 3 demonstrates, the Government of Ontario has pursued an overall policy of restricting capital expenditure in favour of operating expenditure. In the dozen years between 1972-73 and 1983-84, the constant dollar value of the government's operating expenditures increased by approximately 50%. By contrast, capital spending declined by over 20%.

These reductions were not distributed evenly across the entire provincial government. Figure 5 shows that social investment as a proportion of total capital investment by the Government of Ontario has declined from 39.5% to 19.8%. And Figure 6 shows that within the social investment field, education has dropped from 60.6% to 26.2% of the total. The inevitable deterioration of social capital in Ontario over time represents a major but unrecognized crisis requiring a fundamental reassessment of this province's capital investment policy. Such a reassessment should seriously question the recent government practice of attempting to fund capital investments out of current operating funds.

Because funding has not matched need for more than a decade, the number of projects requiring funding has grown from year to year. Requests to MCU for capital funding in 1984-85 from Ontario universities total more than $200 million. Of this amount, over $93 million is required as cash flow in the 1984-85 fiscal year. The initial $93 million, if available, would be spent in the following areas:

Building Renovations	$16.2 million (including $2.9 million for compliance with government code requirements, $2.1 million for roofing, and $0.4 million for facilities for the handicapped)
Land and Site Services	$4.9 million
Alterations	$15.3 million
Energy Management, Programme and Operating Cost Savings	$5.1 million
New Construction:	
- Replacement of Existing Buildings	$22.9 million
- Additions to Total Capacity	$21.2 million
Reimbursement of funds already spent by the universities	$7.6 million

By contrast, the Ministry of Colleges and Universities has provided a total of $10.5 million of capital grants for 1984-85. Of this amount, **only $5.6 million has been granted to new capital initiatives.** The

remainder, almost 50% of the total value, is for projects approved and begun in previous years but whose costs carry forward into 1984-85.

Projecting Future Needs

An examination of what has occurred in the period since 1972 when the freeze on capital funding was instituted discloses one salient fact - the absence of any underlying rationale in determining the level of capital grants provided in any given year or over the period as a whole. It is clear that some rationale is now urgently required to guide government policy in this crucial area over the next ten years. In what follows, a general policy framework is proposed within which university capital requirements might appropriately be considered and several recommendations are made regarding the structure and process within which this policy might be developed. Three areas are covered: Major Repairs, Alterations, and New Construction.

Major Repairs

At the same time as universities have been forced to cope with changing enrolment patterns and expanding research activity, they have to forego proper renewal of their existing physical infrastructure. Figure 7 shows the impact of the capital freeze on the age of physical plant in Ontario universities. Only 8 years ago, more than 60% of university space was less than 10 years old. Now, 13.7% is less than 10 years old. A decade ago, less than 14% of the universities' physical plant was 20 years old or more. Now, that percentage has increased to 27.6% and

significant amounts of space are approaching the 20 year mark (see Figure 8).

Evidence suggests that operating costs of physical plant increase significantly with age. Table 4 demonstrates the phenomenon for privately owned office buildings located in major Canadian cities. Total operating costs per year were about 50% greater for buildings 20 to 29 years old than they were for buildings less than 10 years old. The disparity between relatively new and old buildings is greatest for the costs of building repairs and maintenance. The Building Owners and Managers Association data suggest that a building over 20 years old will have repair and maintenance expenses more than double those of a building less than 10 years old. In addition, cleaning, utilities, and security all will be more costly for older buildings.

Various studies, conducted over the past dozen years, on building life cycles suggest that universities ought annually to be putting into renovations an amount equal to at least 1% of the total value of the physical plant.[2] Given an estimated replacement value of the Ontario universities' physical plant of $3.5 billion, this means that Ontario universities need approximately $35 million per year for building renewal.

2. Council of Ontario Universities, Building Blocks, Volume 5, (1973), pp. 2.6 to 2.12.

More recent work confirms that the guideline of 1% of replacement value is still quite appropriate in determining the amount of funding which should be spent on building renovations. For example, studies in the State of Michigan suggest that estimates of an adequate level of expenditure can be derived by application of the following formula:

$$\text{funding} = 2/3\ BV \times \frac{BA}{1275} \quad \text{where}$$

2/3rds represents the product of several studies which "indicate that building renewal ought to cost, on the average, no more than two-thirds of the cost of new construction. If the cost of renewing a building exceeds this fraction, it is more likely that the building will be demolished and replaced with a new structure."[3]

BV represents the replacement value of buildings, which have been estimated in the case of all Ontario universities to be worth approximately $3.5 billion.

BA represents the building age. To apply the formula to individual buildings, the actual time since initial construction should be reduced if a major renovation project has taken place.

3. Douglas R. Sherman and William A. Dergis, "A Funding Model for Building Renewal", Planning for Higher Education, Volume 9, Number 3, Spring 1981, p. 22. Reprinted from Business Officer, February 1981, National Association of Colleges and University Business Officers.

1275 is the age-weighting constant based on a 50 year life cycle of the building. Any adequate formula, if it "is to generate renewal dollars on a schedule consistent with renewal needs, ... must be weighted to skew fund generation towards older structures."[4] Using the building age and the age-weighting constant allows this to occur.

When this formula is applied to the Ontario university system as a whole, given that the average building is 19.2 years old, the estimate of an annual requirement for renovations is $35 million. This is the same amount as determined by the single estimate amounting to 1% of total replacement value. If, however, there is no expenditure on major alterations or for new construction in the near future, the guideline of 1% of replacement value, by Michigan standards, will no longer be adequate.

Alterations

There is also need to alter the use patterns of existing space, a need unrelated to that for new construction. Again this need arises from changes in academic programming to meet student demand and increased research activity. The ability of the universities to respond has been constrained by lack of capital grants for this purpose.

4. Ibid., p. 22.

In the past COU has estimated that an amount equal to at least one-half of one percent of the total value of the physical plant should be invested annually in alterations. This figure was based on the work of the Task Force on Building Life Costs which reported to the COU Committee on Capital Financing.[5] Table 5 shows that the total replacement cost of the physical plant of the Ontario university 'system' is approximately $3.5 billion. This would suggest that a proper programme of capital funding for building alterations would provide $17.5 million per annum.

New Construction

In the early 1970s the COU Committee on Capital Financing undertook considerable work in developing a set of objective guidelines for the measurement of capital requirements. The results of this work were published over several years under the general title, Building Blocks. This activity culminated in 1978 with the publication of data on university space inventories and a final version of COU space guidelines. OCUA recommended to the Minister that the space standards be accepted at least as comparative measures of the space needs of the Ontario universities (OCUA Advisory Memorandum 77-IV) and the Minister concurred.

There is still a need to examine seriously the adequacy of the need. COU stands ready now, as it has been for some years, to participate with

5. Council of Ontario Universities, Building Blocks, Volume 5, (1973), pp. 2.13 to 2.17.

OCUA in such a review. For the present, these are the only university space standards available that are applicable to Ontario. Their value is reflected in the fact that Building Blocks continues to attract attention in other jurisdictions both in Canada and in the United States.

Data on current Ontario universities space inventories as of 1 November 1983 and their relation to the COU guidelines on space standards as developed in Building Blocks have recently been published. The data indicate an overall space deficit for the system amounting to 9.8% or 220,000 net assignable square metres. It is apparent that there is a large variation among the institutions in terms of available space relative to space requirements. Some of these differences might be narrowed, however, if the quality of the inventoried space were to be taken into account as well as the extent to which the space has been privately funded. (It should be noted that the Government of Ontario has encouraged institutions to seek private funding to assist them in meeting capital requirements. Notwithstanding, COU space guidelines as presently formulated make no distinctions between public and privately funded space.)

The data also show considerable variations by space type. The deficit in the area of research space is of particular concern. Indeed, the size of this deficit may be understated in these data since it rests on input measures that make no provision for recent increased research

productivity in the universities. This matter requires urgent review, and COU is establishing a review mechanism for the guidelines and related matters.

As has been noted, new construction to a total of 220,000 net assignable square metres will be necessary to bring the universities' space inventory to the level required under the guidelines. Table 5 displays the surplus/deficit position by space type together with estimated construction costs which total $362 million.

Given the uncertainties over future enrolment it would not be prudent to commit capital funds of this magnitude to support new construction. Nevertheless, it is clear that a serious space deficit exists and some new construction is warranted. It is proposed that OCUA accept responsibility for advising on new construction requirements and that it recommend an eight-year programme for new construction to begin in 1985-86 employing the current space formula and in an amount sufficient to meet half of the current deficit. This would provide a planning perspective for new construction to 1993-94 when enrolment is projected to return to present levels.

Conclusion

For more than a decade Ontario universities have felt frozen in time, bound by the freeze on capital funding, unable adequately to respond to many of the demands being made on their physical environment. A growing student body, marked shifts in student programme demands, an expanding

involvement in research, deteriorating physical plant facilities and more government regulations - all of these have imposed additional demands on Ontario universities. These demands have coincided with a marked unwillingness on the part of the Ontario government to recognize their force and to provide the funds necessary to meet them.

This brief has documented the magnitude (in 1983-84 dollars) of university requirements in the area of capital funding:

> $35.0 million additional funding every year to enable universities to carry out an adequate program of renewal of existing building fabric and systems.
>
> $17.5 million additional funding every year to enable universities to adapt existing physical structures to tomorrow's needs; and
>
> $22.6 million per year over the next 8 years for new construction required to bring universities more into line with the space guidelines.

If these amounts appear large, especially in comparison with the present level of MCU capital grants, it should be remembered that they are quite small in comparison with the $3.5 billion already invested in Ontario university physical plant. These amounts are also quite small in

comparison with $1.1 billion provided annually through the provincial operating grants, an expenditure which cannot be utilized to its utmost efficiency without accompanying capital spending. To permit billions of dollars of plant assets to become run down and to fail to provide adequate space for teaching and research programmes which are expected to be at the leading edge of intellectual and technological development would be a major waste of the public's investment.

At present institutional difficulties in dealing with the major problem of capital underfunding are exacerbated by inefficiencies in the manner in which the inadequate funds are distributed. Not only is the amount of funding insufficient; the manner of its distribution is inefficient. A new approach is urgently needed, one that would permit the universities to plan their physical plant expenditures several years in advance. This new approach should take into account the variety of ages and conditions of university buildings throughout the province. It should allow the universities to plan and implement a programme of physical plant regeneration based on their own priorities and free them from the task of having continually to respond to 'second guessing' by the Ministry of Colleges and Universities. And finally, this new approach should provide sufficient funds to meet fundamental objectives of the capital funding policy.

Much work has been done, in Ontario and in other jurisdictions, to develop university space guidelines, building life cycles and funding formula covering renovations and alterations. With a firm commitment to

develop a new approach and employing these tools, COU believes that progress can be made in improving capital funding, even in the coming year.

In our view, OCUA has an essential role to play both in the development and in the administration of a capital grants policy, one that it is not now playing. OCUA should be given formal responsibility for capital grants, recommending both on policy and on the distribution of grants under the terms of the policy. It should then enter into active dialogue with COU in order to develop a revised capital grants policy, one that will effectively address the issues raised in this brief.

Table 1

Sponsored Research Revenue
1970-71 to 1982-83

	Constant Dollar Index	Proportion of Total Funds %
1972-73	100.0	12.2
1973-74	99.8	12.2
1974-75	102.0	12.4
1975-76	102.9	12.1
1976-77	103.4	11.6
1977-78	113.7	12.6
1978-79	117.3	13.3
1979-80	125.5	14.6
1980-81	131.3	15.6
1981-82	154.4	17.9
1982-83	155.2	17.2

Source: COFO-UO, Financial Report of Ontario Universities, various years. Excluding, for reasons of comparability, Guelph, Algoma, Nipissing, Hearst, OCA, OISE, Ryerson and Wilfrid Laurier.

Table 2

Capital Grants to Ontario Universities
1965-66 to 1983-84
($000s)

	OUCAC Debentures	MCU Capital Grants	Health Sciences	Other	Total	Constant 1972-73 Dollars
1965-66	89,239				89,239	
1966-67	93,105				93,105	
1967-68	99,995				99,995	
1968-69	132,974				132,974	
1969-70	101,619		7,634		109,253	
1970-71	111,760		28,045		139,805	
1971-72	114,739		21,308		136,047	
1972-73	89,162		9,550		98,712	98,712
1973-74	46,254		8,238		54,492	50,079
1974-75	17,398		4,244		21,642	17,840
1975-76	16,236		4,176	3,181	23,593	15,627
1976-77	11,190		5,330	5,186	21,706	12,372
1977-78	18,250		7,693	5,946	31,889	16,863
1978-79		15,247	2,076	178	17,501	10,365
1979-80		13,500	5,107	975	19,582	10,618
1980-81		13,500	4,924	2,220	20,644	10,074
1981-82		13,500	8,774	515	22,789	9,921
1982-83		14,270	5,100	10,250	29,620	11,790
1983-84		12,200	5,100	8,482	25,782	9,723

Note: "Other" includes funding from BILD, Wintario, the Ministry of Energy and MCU funds for minor repairs (available between 1975-76 and 1977-78 and subsequently incorporated into operating grants).

For purposes of comparability over time, MCU funds for minor repairs are excluded from the "constant dollar" column.

Table 1

Ontario's Capital Investment Record

1972-73 to 1983-84

($ million)

	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83e	1983-84e
Social Investments												
Education	264	161	128	144	113	111	91	90	58	75	108	116
Health and Social Services	163	149	155	185	155	175	153	111	187	251	270	252
Recreational and Culture	9	18	17	46	36	66	85	78	50	75	91	90
	436	328	300	375	304	352	329	279	295	401	469	458
Economic Investments												
Transportation	339	432	468	544	499	641	591	688	880	1,010	1,176	1,194
Environment	115	130	211	290	280	263	271	261	276	311	318	280
Commercial Loans	43	28	45	52	30	42	40	39	33	36	15	30
Employment Development/BILD*	-	-	-	-	-	-	-	128	124	-	-	-
Other	2	2	5	11	13	15	15	21	39	129	151	149
	499	592	729	897	822	961	917	1,137	1,352	1,486	1,660	1,653
Other												
Financial Assets	64	103	133	206	238	119	35	-	-	325	37	59
Land	82	173	195	103	62	62	64	106	27	11	12	10
Miscellaneous	22	30	42	46	54	42	16	39	35	88	104	134
	168	306	370	355	354	223	115	145	62	424	153	203
Total												
Actual Expenditures	1,103	1,226	1,399	1,627	1,480	1,536	1,361	1,561	1,709	2,311	2,282	2,314
Constant Dollars	1,103	1,127	1,153	1,220	1,039	993	806	846	834	1,006	908	873
Index	100.0	102.2	104.5	110.6	94.2	90.0	73.1	76.7	75.6	91.2	82.3	79.1

*The Employment Development Fund was established in 1979 and was succeeded by the Board of Industrial Leadership and Development in 1981. Data reported by expenditure sector in later years.

Table 4

Canadian Private Sector Operating Expenses
For Office Buildings, 1983
(dollars per total building rentable square feet)

Expense Categories \ Age	Years 0-9	10-19	20-29	+ 50	Total
Cleaning	.81	.96	1.26	.90	.91
Repairs & Maintenance	.73	.97	1.58	1.13	.93
Utilities	1.13	1.21	1.38	1.01	1.19
Roads, Grounds & Security	.29	.28	.49	.15	.32
Administration	.48	.34	.49	.45	.43
Total	3.42	3.72	5.10	3.62	3.76

Source: Building Owners and Managers Association International, 1983 BOMA Experience Exchange Report, pp. 312-318.

Table 5

Replacement Cost of University Space
and Cost of Additional Space

	NASM	Replacement Cost per NASF	Replacement Cost per NASM	Total Replacement Cost ($000s)	Generated Space	(Surplus)/ Deficit	Cost of Additional Space ($000s)
Classroom Facilities	212,434	115	1,237	262,866	232,724	20,290	25,107
Teaching Labs	332,034	225	2,421	803,854	339,885	7,851	19,007
Research Labs	250,106	285	3,067	766,975	281,617	31,511	96,632
Academic Offices	326,471	125	1,345	439,103	304,436	(22,035)	(29,637)
Admin Offices	146,886	125	1,345	197,562	161,116	14,230	19,139
Library	259,548	125	1,345	349,092	328,463	68,915	92,691
Athletics	155,306	110	1,184	183,820	184,107	28,801	34,089
General:	253,525	142	1,524	386,344	313,282	59,757	91,063
Food Services	89,718	170	1,829	164,112			
Book Store	28,728	115	1,237	35,548			
Common Use	88,588	125	1,345	119,151			
Assembly	46,491	135	1,453	67,533			
Special:	96,316	116	1,251	120,458	107,411	11,095	13,876
Audio-Visual	13,602	170	1,829	24,881			
Health	5,187	170	1,829	9,488			
Maintenance	36,589	90	968	35,433			
Central Services	40,938	115	1,237	50,657			
Total	2,032,626	160	1,727	3,510,075	2,253,041	220,415	361,967

Note: NASM is based on COU inventory data of 1 November, 1983.
Generated space is derived using COU space standards.

Figure 1

FTE ENROLMENT AT ONTARIO UNIVERSITIES 1972–73 TO 1983–84

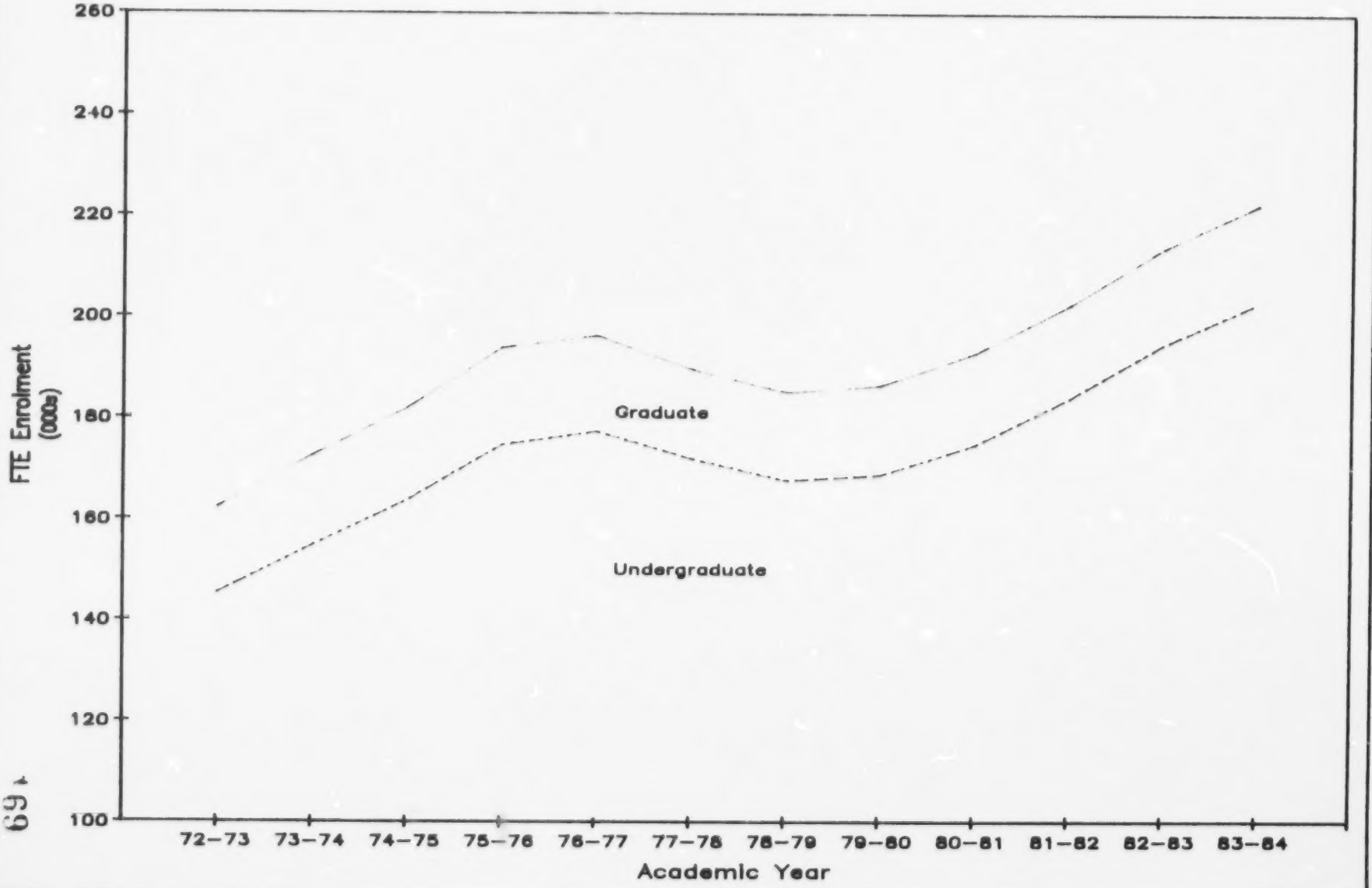
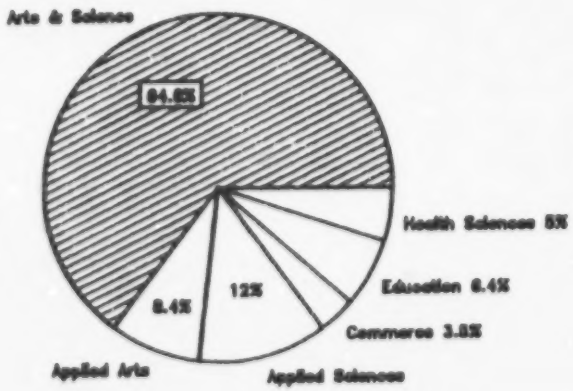
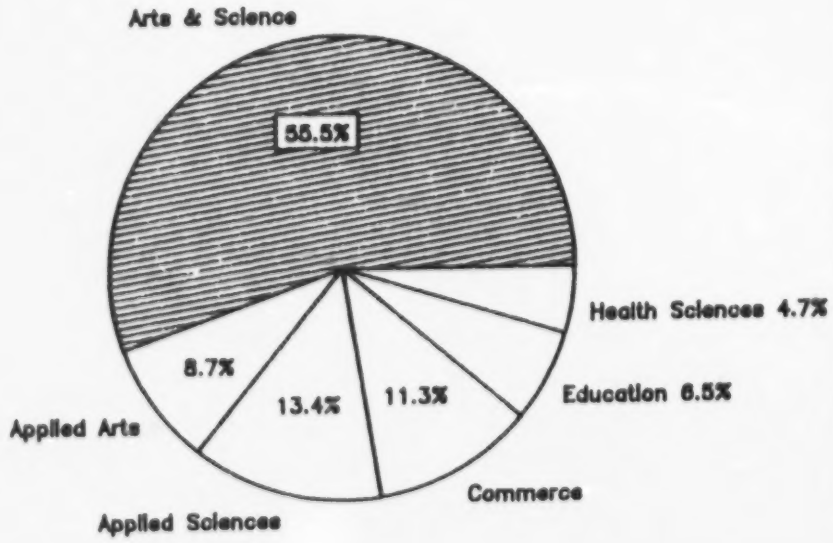


Figure 2

BACHELORS AND FIRST PROFESSIONAL DEGREE ENROLMENT BY AREA OF STUDY 1972–73 AND 1982–83



1972–73



1982–83

Figure 3
Summary of FTE Enrolment
Including ROSE

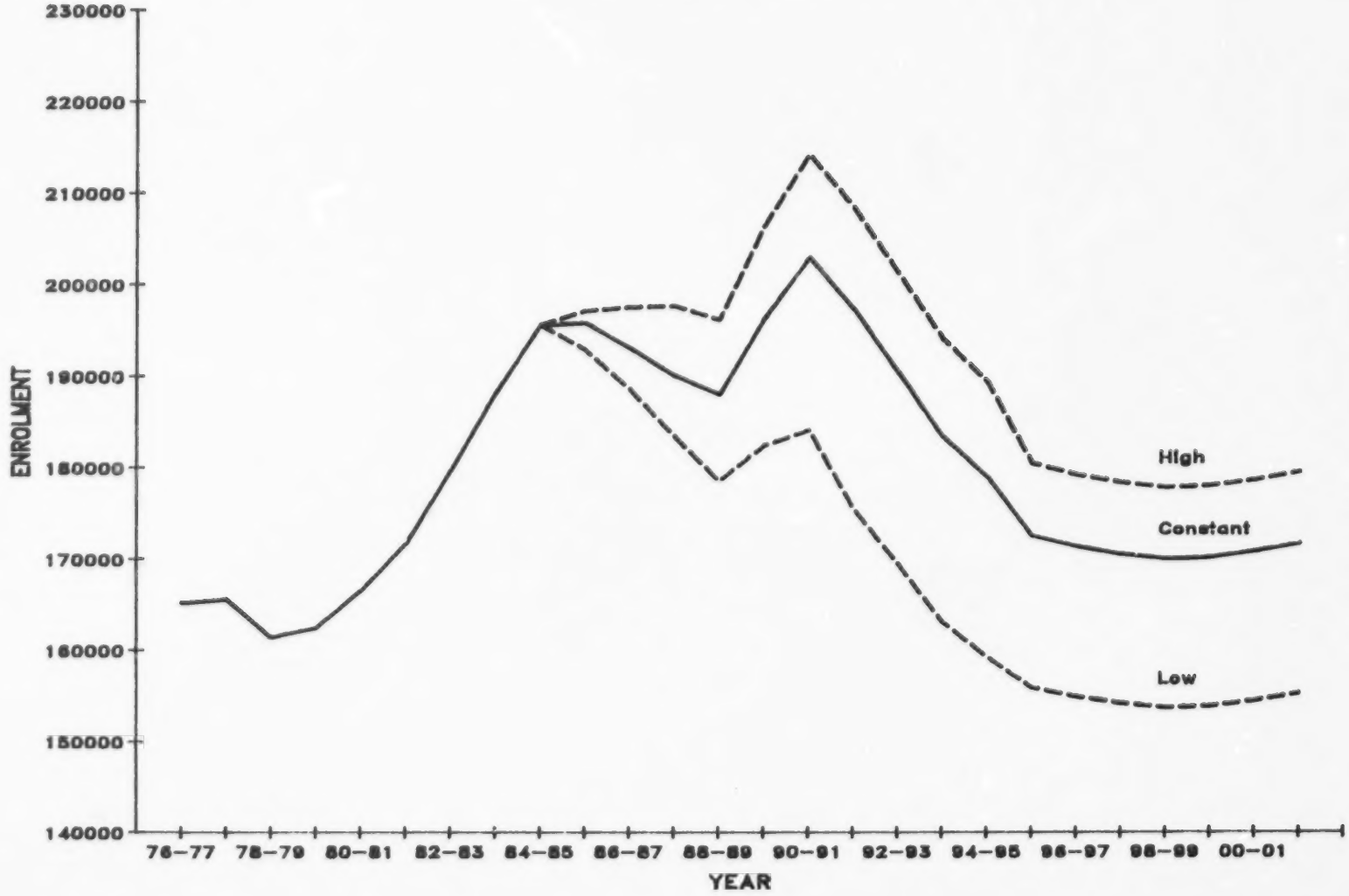


Figure 4

CAPITAL GRANTS TO ONTARIO UNIVERSITIES 1972–73 TO 1983–84

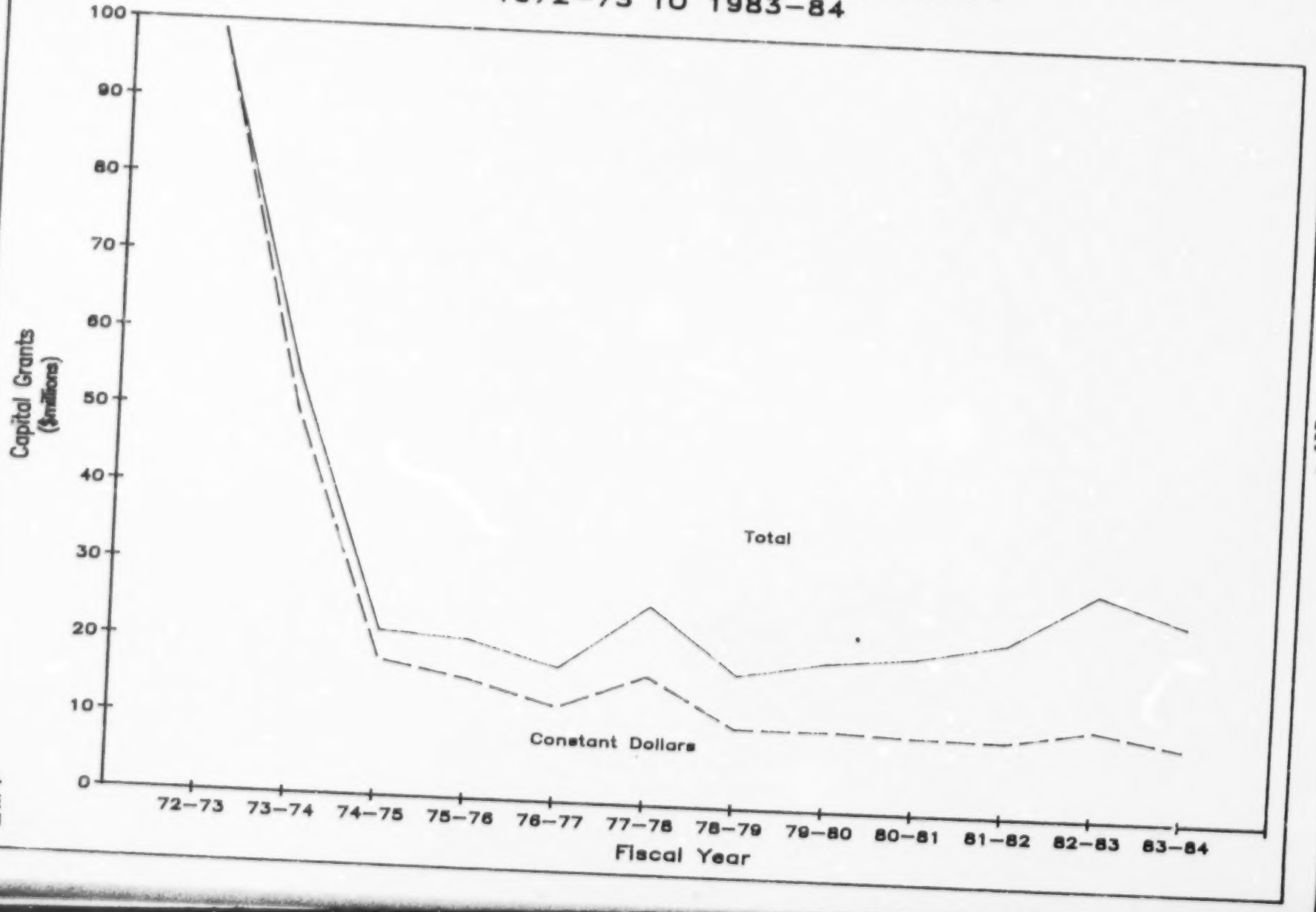
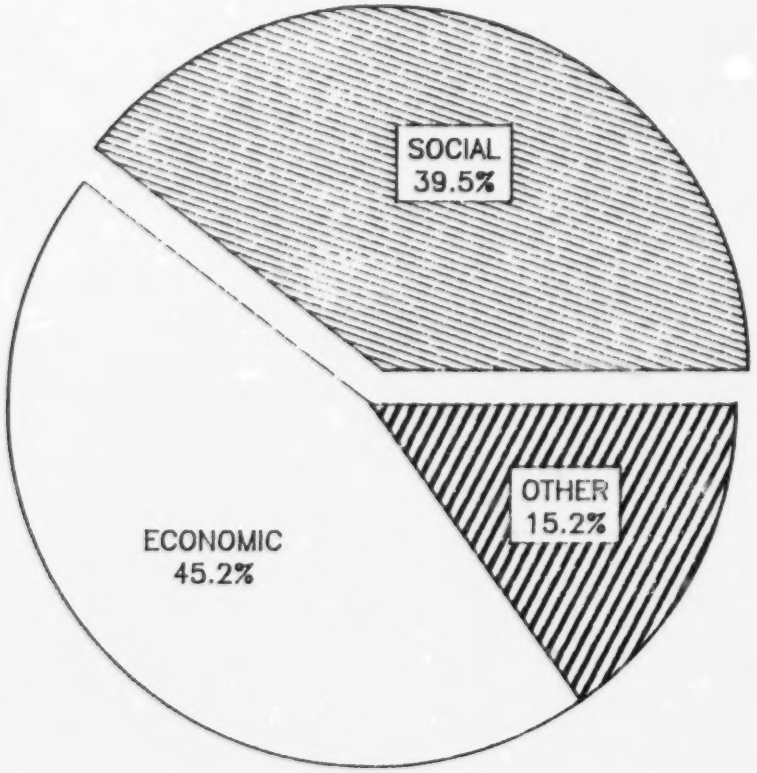


Figure 5

ONTARIO'S CAPITAL INVESTMENT RECORD
1972–73 AND 1983–84
(1972–73 Constant $s)



1972–73

1983–84

Figure 6

ONTARIO'S CAPITAL INVESTMENT RECORD SOCIAL FIELD, 1972–73 AND 1983–84

(1972–73 Constant $s)

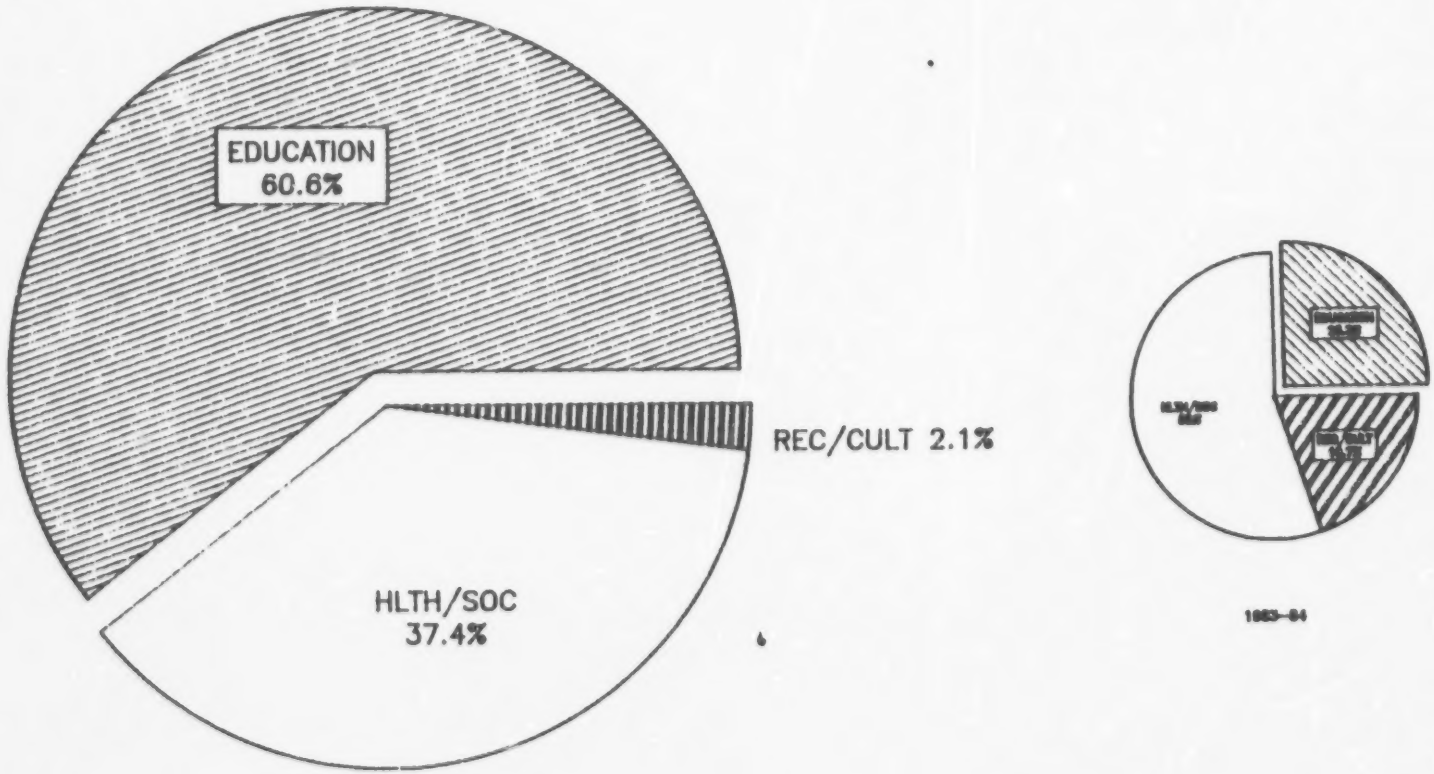
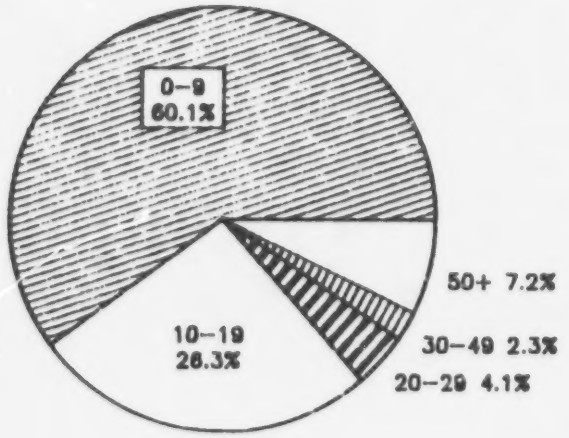
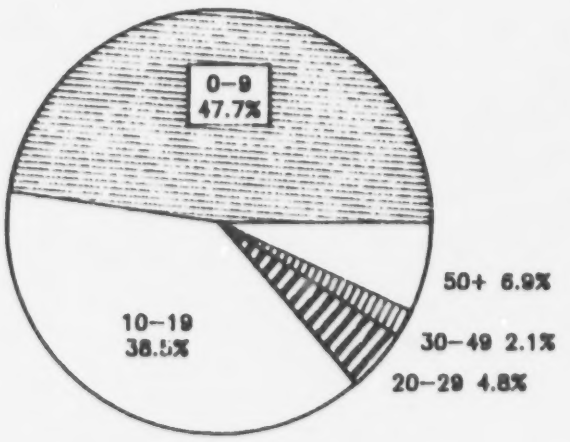


Figure 7

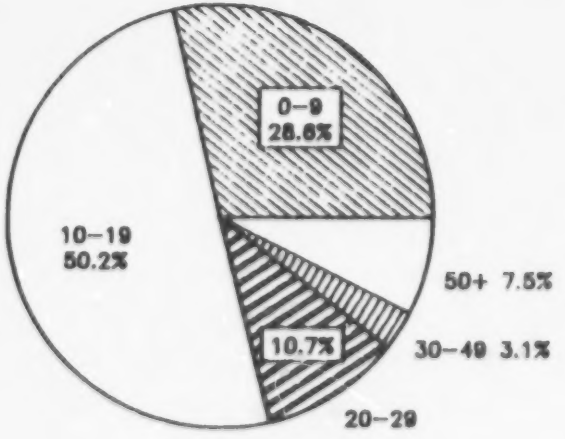
AGE PROFILE OF ONTARIO UNIVERSITY SPACE



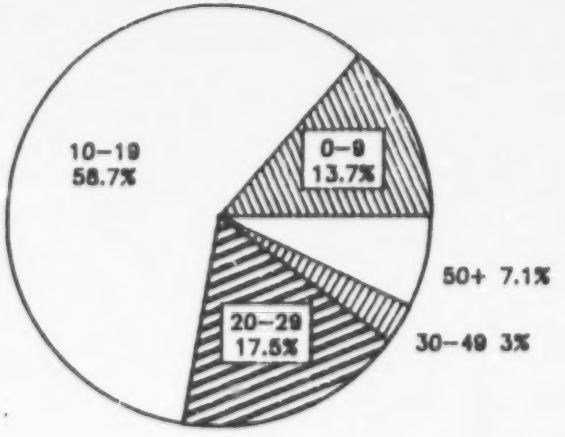
1975–76



1977–78



1980–81

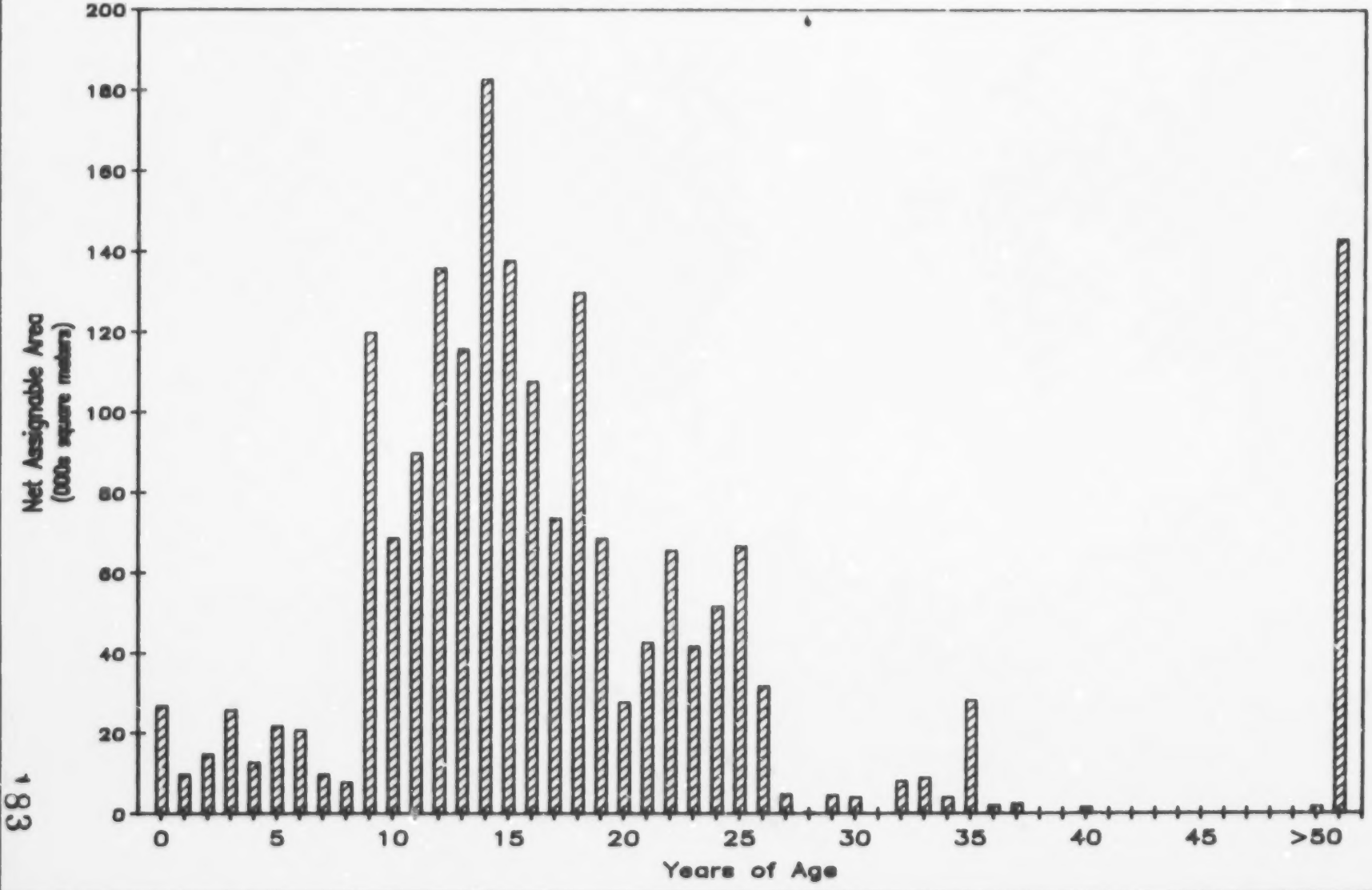


1983–84

Figure 8

AGE PROFILE OF ONTARIO UNIVERSITY SPACE BY SINGLE YEAR OF AGE

(as of 1 November, 1983)



APPENDIX F

On Private Giving

Report Commissioned for the
Association of Universities and
Colleges of Canada
by
Coopers & Lybrand

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August 1984

INTRODUCTION

The Association of Universities and Colleges of Canada is interested in increasing the amount of financial support its members receive from the public. In this connection, we were asked to suggest ways in which the Canadian tax laws could be amended to increase the incentive towards making donations. This paper sets out a number of ideas in the order of their estimated liklihood of implementation. We also comment on each idea as to its perceived benefits, risks and other implications. First, however, it may be helpful to place matters in perspective by reviewing the history of Canadian tax law in respect of donations, the current provisions and by way of comparison, the existing U.S. situation.

HISTORY OF TAX RELIEF FOR DONATIONS IN CANADA

While the original Canadian income tax law was enacted in 1916, it was not until 1948 that a provision allowing a deduction for charitable contributions was added to the Income Tax Act.

Between 1948 and 1977, housing corporations, amateur athletic associations and certain foreign universities were added to the list of charitable organizations. In 1967, the Income Tax Act was amended to require charities to be registered with the taxation department, to keep certain books and records and to issue official receipts for contributions. Since that date, taxpayers making donations to non-registered charities have not been entitled to tax relief.

For the years preceding 1959, individuals were allowed a tax deduction for donations (other than gifts to the Crown) not in excess of 10% of their net

Coopers & Lybrand

income, while corporations were limited to 5% of their net income. In 1959, the limit was increased to 10% for corporations and in 1972, it was raised to 20% for all taxpayers. Then, in 1980, the Income Tax Act was amended to permit a one-year carry-forward of donations in excess of 20% of income and in 1982 this was changed to permit a five-year carry-forward.

CURRENT CANADIAN TAX PROVISIONS ON DONATIONS

It is noteworthy that the Income Tax Act ("the Act") does not specifically refer to Canadian universities and colleges in references to charitable donations. The gifts must be to "registered charities". How does an institute of higher learning come to be a registered charity? Before registering an organization as a charity, Revenue Canada requires that its objectives fit into one of four categories established long ago by the courts:

- the relief of poverty
- the advancement of religion
- the advancement of education
- other purposes of a charitable nature beneficial to the community as a whole.

The third category, then, applies to universities and colleges but clearly, these institutions are not singled out for treatment any different than that available to charities in the other categories. That is not to say that certain types of donations do not receive more attractive treatment than others. The current rules may be summarized as follows:

1. Donations to registered charities are deductible in computing income for tax purposes to the extent of 20% of income for the year. Excess donations may be carried forward for five years.

2. Donations to Her Majesty in right of Canada or a province and donations of cultural property to a designated public authority are not subject to the 20% limitation and are fully deductible to the extent of the taxpayer's income for the year. Excess donations can be carried forward for five years.

3. In the case of Canadian cultural property, the donor receives a tax deduction for the fair value of the gift, but does not have to include in income any increase in the value of the property over its original cost.

4. On gifts of property other than Canadian cultural property, the general rule is that a deduction is allowed for the fair market value of the gift; however the donor is also generally considered to have sold the property at fair market value, so that he must recognize any resulting income or capital gain for tax purposes.

5. Special relief is available from the rule in (4) on gifts of tangible capital property (not investments) to a charity where the property can reasonably be regarded as suitable for use by the donee directly in the course of carrying on its charitable activities. In such a case, the donor is allowed to elect that the tax value of the donation and the deemed disposition price be anywhere between the tax

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cost of the property and its fair market value. In this way the donor can avoid having to include a large capital gain in his income on the donation of property to a charity.

6. To the extent that an individual makes excess charitable donations in the year of his death, these may be carried back to the immediately preceeding year and are deductible to the extent that they would otherwise have been allowed. In addition, a gift made by will is treated as having been made in the taxpayer's year of death.

TAX RELIEF IN THE UNITED STATES FOR DONATIONS

The United States has taken a slightly different approach to donations than Canada in some instances, and accordingly it is worthwhile looking at their rules to determine whether or not certain ideas should be pursued here. One must be cautious, however, in taking particular components out of the U.S. tax system without a complete analysis of their impact in the Canadian context.

In general, corporations may deduct gifts to eligible organizations of up to 10% of taxable income and individuals are limited to 20% of taxable income. On the other hand, the ceiling is raised to 50% for most donations by individuals to tax-exempt eductional institutions, as well as to churches, tax-exempt hospitals, governmental units and community foundations.

Corporate donations and contributions by individuals subject to the 50% deduction limit may be carried forward five years; there is no carry-forward for other donations. Some interesting amendments to U.S. tax law have been made in the last few years. In particular:

i) A manufacturer who donates scientific equipment to a college or university is allowed a charitable deduction equal to the depreciated cost of the equipment plus one-half of any unrealized appreciation in value.

ii) A 25% investment tax credit is allowed on amounts paid to colleges and universities for purposes of carrying out research on behalf of a corporation.

iii) Taxpayers may donate their stock portfolio to a college or university and receive a charitable deduction equal to the fair market value of the stock, without having to include any gains in income as a result of having made the gift.

SUGGESTIONS FOR CHANGES TO THE CANADIAN TAX SYSTEM

The Department of Finance is responsible for introducing changes to the Income Tax Act. The Department usually carries out extensive studies to determine the cost as well as the benefits of each particular change to the tax system. These studies are normally based on information on file within the Department as well as information compiled by other government departments such as Revenue Canada and Statistics Canada.

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We, of course, do not have access to Department of Finance studies and therefore are not in a position to be precise about the costs and/or benefits of a particular suggestion. Thus, the suggestions that follow are based upon our judgement that, if they were implemented, they would increase charitable donations to educational institutions in this country. Please bear in mind that technical references are intended to illustrate common situations and may not apply in all instances.

1. Widen the "Canadian cultural property" rules

Probably the most significant charitable contributions in terms of value are donations of appreciated property; for example, an art collection to a gallery, or shares to a private foundation. As indicated above, where Canadian cultural property is given to a designated public authority, the donor is allowed a tax deduction for the fair market value of the property, but there is no requirement to include in income any increase in value over original cost. These rules clearly work well for art collections and other cultural property, and have resulted in substantial donations to art galleries and other public institutions.

If the rules were broadened to include marketable securities and perhaps other similar property, universities and colleges would undoubtedly become the beneficiaries of substantial donations. The U.S. tax legislation permits this type of deduction for donations of a stock portfolio to a college or university. Also, we are aware

of some larger charities, such as the United Jewish Appeal, that have asked the Department of Finance for this type of deduction in Canada. We are not aware of any official response by officials of the Department of Finance, but we suspect that this measure could be very expensive in terms of revenue loss to the government. However, there is a precedent in the special rules for Canadian cultural property.

2. Allow a 150% deduction for contributions to scientific research.

Currently, a deduction may be claimed for payments to approved universities and colleges if the payments are to be used for scientific research related to the class of business of the taxpayer. In addition, businesses are generally able to claim a tax credit of 20% (generally) or 35% (small business) for such payments. If the requirement that the research be related to the taxpayer's class of business was dropped and the deduction was raised to 150% of the amount involved (to offset the lack of a tax credit), individuals would flow significant funds into universities and colleges to assist these institutions in their research activities. It would also help accomplish the federal government's objective of increased funding of research and development.

A deduction for 150% of the amount of a donation might be much simpler for donors to understand then the current government incentives to assist research efforts. These are rather complicated and, in practice, have proven gimmicky. However, the principal reason

for the complications is the government's need to be as certain as possible that its assistance is spent on qualified activities. This problem would not disappear if certain donations to educational institutions were treated more favourably than others as the universities and colleges would have to satisfy the authorities that the funds were not diverted from their intended use in research. On the whole, this idea looks to us to be administratively too difficult, but there may be a solution we have not yet thought of. It could also make it difficult for universities to raise funds except for research.

3. Offer a tax credit for certain donations

This idea is essentially the same as (2) except that the additional 50% deduction for qualified donations would be replaced with the tax credit now available to businesses in certain circumstances. The appropriate rate of credit is arguable but the drawbacks outlined in (2) remain.

4. Allow a deduction for rent not charged

Taxpayers who are not interested in donating a particular item to a university or college would be more prepared to lease it at zero rent if a deduction could be claimed equal to the value of rent foregone. This would be attractive to the educational institutions in that they might gain access to the use of certain assets that otherwise they would not.

This is not likely to develop into a major source of indirect funding, but from a government perspective, raises the difficulty of establishing fair market rents, particularly in situations where no comparable "real" transaction exists.

5. Remove the 20% of income limitation

If donations to educational institutions were treated the same as gifts to Canada or to a province, such donations would be 100% deductible against taxable income in the year of donation. The removal of the 20% limit would undoubtedly result in certain gifts being made that otherwise would not, and these would tend to be the more substantial types of donations.

The recent introduction in Canadian tax law of a five-year carry-forward for unclaimed donations certainly goes part way towards alleviating the problem of an expired deduction. However, the question that remains is one of timing - why not allow 100% tax relief immediately rather than forcing it to be spread out over a period of up to five years. An immediate full deduction is certainly a more powerful stimulant to making the larger type of contribution.

In special situations involving very large donations, it may be possible to make the donation to a province which in turn makes the donation to a university. This indirect gift gets around the 20% rule. However, it is usually a special donation that would warrant this procedure.

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6. Tax credit instead of a deduction

The suggestion has been made before that a 50% tax credit should replace the deduction system now in place. The difficulty is that a 50% tax credit would apparently cost the government too much in tax revenues. The credit might have to be closer to 30% from the government's point of view to be equal in tax cost to the present deduction system.

Given that a very high proportion of donation dollars are contributed by higher income earners (and this is particularly true of donors to universities) or large corporations taxable at a 50% rate, any tax credit of less than 50% could be counter-productive. It would take many small donations to replace only a few lost larger ones. Before promoting this idea, one would want to be very certain that the tax credit would not be less than 50%. Otherwise higher income taxpayers, who are the main contributors to universities, would get less tax relief. Since a switch from a deduction to a tax credit would presumably apply to all donations, one would also want to assess the liklihood of lower income earners preferring to support universities and colleges rather than other types of charities.

7. Make the tax credit refundable

Most tax credits are not refundable if their aggregate exceeds an individual's or corporation's tax as otherwise calculated, although this factor is frequently offset by a carry-forward capability. The

idea of making a donation tax credit refundable is simply to take the idea in (6) one step further and thereby enhance its attractiveness in certain circumstances.

8. Encourage U.S.-style developments

Some of the U.S. provisions could be very attractive to universities and colleges in Canada. For example:

i) on contributions of scientific research equipment, manufacturers are allowed a charitable deduction equal to the depreciated cost of the property plus one-half of any unrealized appreciation;

ii) a shareholder may transfer shares of his corporation to an educational institution and obtain a charitable deduction equal to the fair market value of the shares without incurring a tax on any deemed gain. The shares can then be redeemed over a period of years by the corporation so that the educational institution receives cash and ceases to be a shareholder.

These ideas are fairly self-explanatory and represent, in fact, specific application of the principles discussed in (1) and (2) above. It is interesting that U.S. law has been amended to permit these particular incentives and one might theorize that more ground may be gained if a general concept can be reduced to very particular provisions. In other words, if there is a specific application of an idea that would be very attractive to the unversity and college

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community (perhaps because of its unique relevance to it) but is not so broad that the tax revenue loss becomes excessive, such an application might have a better chance of a good reception at the Department of Finance. Given the opportunity, a number of these specific ideas will emerge.

9. **Obtain a deduction for donated time**

Individuals who perform services to educational institutions for no remuneration or for remuneration that is less than fair market value could be considered to have made a charitable donation equal to the difference between the fair market value of the services performed and the remuneration received.

In our view however, such an idea is unlikely to be acceptable because it would be hard to administer and because the number of people in the volunteer sector is very high; hence the cost would be prohibitive.

CONCLUSION

As indicated at the outset, we are not in a position to comment on the cost to the fiscal authorities of any of the above ideas since we do not have the relevant information available with which to perform the calculations. Based upon our understanding of the federal government's response to the proposals put forward by the Coalition of National Voluntary Organizations, it appears that there is considerable concern that many proposals for change to the charitable donations provisions will either cost too much or be hard to administer.

It also seems to us that any submission to change the law only as it applies to educational institutions may be too narrow in scope. It may be preferable for educational institutions to obtain the support of other non-profit, public or para-public institutions as part of making a submission to the Department of Finance. We have in mind public libraries, public museums and similar institutions established solely for educational or scientific purposes.

In our opinion the most expensive proposals from the government's point of view would be proposals one, two, six and eight. However, these are the ideas that offer the best opportunity for increasing donations to universities and colleges. The other proposals would probably not be very expensive to the fiscal authorities but they also do not offer the same potential.

We will be pleased to offer our assistance in presenting a formal submission to the Department of Finance.

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